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## ORIGINAL DEPARTMENT.

### LECTURE.

### THE ASIATIC CHOLERA.*

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LADIES AND GENTLEMEN: About a month ago the Philadelphia Society for Organizing Charity, in whose hall we are now assembled, invited me to deliver an address to-night on cholera. This dangerous epidemic disease, whose cradle stands in the marshy regions of the delta of the sacred Ganges river, several years since made its appearance in the neighborhood of Calcutta, and in Egypt. Last year it began its ravages in Toulon and Marseilles, thence spread south, and thousands of human beings fell victims to the fell destroyer in sunny Italy and rich Spain. But it was not until, a few months since, the gay capital of the French Republic, Paris, was invaded by the dreaded malady, that civilized humanity really awoke to the threatened danger. For if such a center of human industry as Paris is once infected, if the Asiatic disease once takes hold of a city, to which in the interest of modern civilization thousands yearly flock from every part of the known world, and whence thousands return to their native lands, the further spread of the disease-bearing contagion to every country of the globe where human energy has established intimate commercial relations, simply becomes a question of time. For like Ahasverus, whom the curse of Christ sent wandering for thousands and thousands of years from one end of the earth to the other, from the South pole to the North pole, from the eastern coast of the Pacific across Asia, Australia, Europe, and Africa, over the mighty Atlantic, to the western coast of America and back to Asia, until the day when all mankind will have to appear before His throne and bow to the final judgment—like this ever-wandering Jew, the epidemic Asiatic cholera travels along the paths of commerce, follows the highways of nations, and thus step by step invades every place where the industry of men seeks to form a connecting link in the great chain of international intercourse.

Formerly, ere steam whirled us rapidly across a continent, when the slow-sailing ships and the camels of the eastern caravans were the only means of human intercourse between the East and West, the South and North, the dreaded malady marched from country to country with the same slowness that characterized the commercial relations of nations. But in modern times the death-dealing disease follows the roads of commerce with the rapidity with which in the present era one land maintains its relations with another.

One significant fact was early learned from the observation that the cholera always progressed from one locality to another in the manner of human intercourse. The poison causing the disease could not be in the atmosphere, otherwise its spread would have taken place in the direction of prevailing winds, and the infection of localities would have happened sooner than by human means an article may be transferred from district to district. There is no case on record where the malady had developed itself *eo ipso*, and those in-

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stances which used to be cited as examples proving the possibility of the outbreak of cholera without its pathogenic contagion having been imported, have since been demonstrated as fallacious. If science has established one indisputable fact, it is that the source of the disease comes from the Ganges, and the importation of the infectious material is the first and most essential condition for the appearance of cholera in any locality. But that the air did not contain and spread the contagion, and that this had to be carried to a district ere the latter could be infected, were two truths which proved to the scientific world that were the agent causing the disease but known and tangibly demonstrated, the prevention of its introduction would become a probability. The main point was, therefore, the discovery of the pathogenic element of the infectious material which produced the cholera.

It is my intention to-night to give you a full resumé of all that to-day is known concerning this disease. Should I, therefore, occupy a little more time than that usually allotted to a lecturer, I hope you will pardon me if I assure you that you will leave this room to-night in the possession of all the knowledge that the most accomplished physician may have to-day of this disease.

For a better understanding, as not all my hearers are physicians, I may be permitted first to give you the history and a description of the disease before I consider the most vital point—its cause.

The name cholera is derived from the Greek χολή, bile, and ῥέω, to flow. Epidemics of the disease are known to have occurred at various times for several centuries in the Indian Archipelago. But it was not until 1817 that the outbreak of a violent epidemic in Jessore, in Bengal, specially drew the attention of the medical world to the disease, which at that time caused the deaths of thousands of Europeans and native-born, by spreading nearly over the whole of British India. For three years the malady continued its ravages, invading Ceylon and the neighboring islands, and then it suddenly assumed still greater proportions by infecting China and Persia. 1823 it reached Russia, and from that time on it continued steadily its march west, fresh epidemics appearing at intervals in India, and giving new food to the disease. 1830, a new outbreak in Persia and along the shores of the Caspian Sea finally extended into Europe, and caused in the whole Russian empire immense ravages, the mortality being so great as to produce the utmost consternation all over Europe. Soon the rest of Europe became invaded, and during the year 1832 its disastrous effects were felt in Great Britain. Then the contagion crossed the Atlantic and the continent of North America was also infected, while in 1835, Arabia, Turkey, Egypt, and the whole of North Africa, gave the proof that the epidemic, starting in 1817 in Asia and continuing up to 1837, whithin these twenty years had visited a large portion of the world.

In the year 1841, another great epidemic broke out in India, and soon extended over a still wider area than the former. Entering Europe in 1847, it passed through Russia and Germany, over to England, and thence to France, whence it was carried to our country, and subsequently to the West Indies. This epidemic seems to have been yet more deadly than the first, especially in Great Britain and France. A third great outbreak took place in 1850, and made its appearance three years later in Europe, where it was specially destructive amongst the Crimean armies, but less violent in England. This epidemic was, however, specially severe in North and South America. Since then, minor and more local epidemics have at times been observed in Russia, Turkey, and Western Asia; but the disease never again obtained a foothold in Europe, until the outbreak about two years ago in Egypt and Calcutta caused its transportation to Toulon, whence it spread to Italy and Spain, and ultimately reached Paris, where it still rages, though, on account of the cold weather, at present not with great vehemency.

This malady, since the disappearance of the Plague or the Pest, and since the cessation of the grave epidemics of small-pox, probably more dreaded by the people in general than any other infectious disease, is usually characterized in what seems to be its normal type by three stages.

The first stage, or that of cholera-diarrhœa, shows itself simply by the symptoms of a common, mostly painless, diarrhœa, which, generally making its appearance after an error in diet at a time when the cholera is epidemic in a locality, is but too often neglected. It is exactly like a common summer-diarrhœa, and in its beginning rarely associated with vomiting. If early attended to, the patient generally completely recovers within one or two days, and is exempt from the graver disease during the whole epidemic. But if interfered with too late, or left to itself, one of two things will happen: either death sets in rapidly by the diarrhœa suddenly assuming all the characteristic signs of genuine cholera discharges, accompanied by vomiting, or gradually the other stages of the disease develop themselves.

In the second stage the diarrhœa continues, but

increases a great deal in frequency, and the discharges, greatly augmented in quantity, take on the appearance of rice-water. Still more frequently there is no prodromic stage of common diarrhœa, but suddenly, often during the night, the most violent diarrhœa sets in, the evacuations having from the very beginning the character of rice-water, consisting of large quantities of disintegrated epithelium and specially peculiar by the total absence of all the constituents of bile. The rice-water-diarrhœa has scarcely lasted one or more hours, when copious vomiting of the same rice-water-like masses, and accompanied by intense pain in the region of the stomach, and great thirst, set in.

With the appearance of this vomiting, the graver symptoms follow each other in rapid succession, and what might have first seemed to the uninitiated an attack of cholera morbus soon presents to the trained eye the picture of the justly dreaded Asiatic disease. Cramps of the legs, feet, and of the abdominal muscles, cause the unhappy sufferer the greatest agony; and while the mind continues clear and the more feels the torturing pains, the fatal stage of collapse is ushered in.

The face assumes a cadaverous hue, the nose becomes pointed, the eyes sink back into their orbits, deep dark rings surrounding them, and the blue lips, blue finger-nails, and ice-cold, dry, and wrinkled skin all denote that the excessive drain has emptied all the vital channels of their fluids, and that life must be despaired of, if the symptoms do not soon ameliorate. More and more pinched appear the features, the external integument assumes a bluish or purplish tint, colder and colder becomes the body; the pulse at the wrist is imperceptible, and the vox cholerica, that peculiar hoarse whisper which generally foretells the fatal issue, already seems to come to us from beyond the grave. Often death sets in in less than one day, and at the beginning of an epidemic cases are not rare, where the collapse is so sudden and so complete, that life departs in less than one hour.

It still happens at times that recovery takes place even from the stage of collapse. Then reaction sets in. The dangerous symptoms cease; the heart regains its power; in some unaccountable way the vessels once more become filled with fluids, the reëstablished circulation causes the reappearance of the pulse, and the disappearance of the varied hues of the skin; the bodily heat is restored, and vomiting no longer harasses the sufferer. The diarrhœa sometimes still continues for a while, or the patient falls into a typhoid condition, in which he may be again brought near to the grave. As a general rule, convalescence is the slower and relapses occur the easier, the further the patient had progressed in the stage of collapse. Occasionally, also, various complications arise, which still more increase the danger to the victim; but with rare exceptions the disease presents the picture as described, only the duration of each stage varying in the different individuals attacked.

That so grave a malady, causing such enormous ravages, should have attracted the attention of medical minds from its first appearance, may be presumed. The most careful researches were made with the intention of discovering the morbid agent which caused this dangerous epidemic disease, but for a long time in vain. Then, about fifteen years ago, an observation was made which promised a great advancement in our knowledge of infectious diseases.

At the boundary between the animal and vegetable kingdom there is an immense empire of minute beings, too small to be visible to the naked eye. So difficult becomes here the distinction between the animal and the plant, that even experts for a long time were in doubt to which of the two kingdoms these micro-organisms belonged. To-day the majority of observers incline to the belief that they pertain to the vegetable kingdom. There are two great subdivisions of these microbes, hyphomyceti and schizomyceti. The first so-called moulds or fungi, multiply mainly by the aid of spores. They are parasites, many of which give rise in the human being to diseases of the skin and of the mucous membrane, as favus, thrush, etc. That they do so, is to-day denied by no scientific authority; their destruction by appropriate remedies is at once followed by a disappearance of the disease. The propagation, on the the other hand, of the schizomyceti takes place mainly by division. It is with the last, that we have to do in cholera.

Most of the schizomyceti have a rod-like form, and as a rod, in Greek is called *Βακτήριον*, they have received from science the name of bacteria. But not all bacteria have exactly that shape, and according to their form, they have been arranged in six classes, called—

1. Micrococci or cocci, characterized by their circular shape.

2. Bacilli, by which term are understood all rod-shaped bacteria, whether short or long.

3. Bacteria proper, as which science recognizes only the very shortest bacilli.

4. Vibriones, also rods, but of wavy shape.

5. Spirilli forming short, stiff screws; and

6. Spirochaeti, which appear as long flexible screws.

As many of my kind hearers may not be thoroughly informed concerning these minute beings, a special kind of which forms the pathogenic element, the real cause of Asiatic cholera, permit me to mention a few data regarding them:

Of one single bacterium, which during the first hour has divided into two, these within another hour into four, and within three hours into eight, after twenty-four hours have already become sixteen and one-half millions, after two days two hundred and eighty-one and one-half billions, and after three days forty-seven trillions. If in this manner the development and multiplication could progress unimpeded, the breed of bacteria, springing from one germ of about $\frac{1}{500}$ mm. in length, and $\frac{1}{1000}$ mm. in thickness, within less than five days would completely fill all the oceans of the earth; and the descendants of one single micrococcus, whose weight is so little that sixteen hundred millions of them weigh but one grain, would within three days reach the enormous weight of fifteen million pounds.

If nature had placed no impediments in their way, how soon would these diminutive little beings overpower every living organism! But they can propagate only under certain conditions. For instance, their most common kind, the septic bacteria, cannot obtain sustenance from the healthy living organism. For most others the first condition necessary for their development is their entrance into the living human or animal body; and what difficulties they have here to overcome, may be judged from the fact that in the blood and tissues of *healthy* beings not a single bacterium has ever been found.

But the enormous propagation of septic bacteria at once begins when death has interrupted the mechanism of life, and the organized tissue having ceased its motion, is decomposed, decays, ferments and putrefies. And it is to-day a recognized fact, undisputed by any authority, that the process of putrefaction, by which the dead organized substance loses the form and the composition of its constituent parts, is not only accompanied by the development of bacteria, but, in fact, caused by it and kept up by it alone.

And not only decay and putrefaction are caused by these microbes; there are many chemical processes, known by the name of fermentations, which the celebrated researches of Schwann, Pasteur, Ferd. Cohn, and others, have proven to depend upon the vital process of bacteria, or other micro-organisms related to them. For instance, alcohol fermentation, the process by which sugar is changed into alcohol and carbonic acid, is caused by the activity of the yeast-plant. When fermented fluids become acid, the fact depends upon the change of the alcohol they contain into vinegar; and as Pasteur has demonstrated, the excitor of the vinegar fermentation is another bacterium. If milk becomes sour, a rod-shaped schizomycete is responsible for it; and the peculiar phenomena known as pigment-fermentations, owe their origin to a micrococcus. The remarkable incident, which in times passed by caused so much religious superstition, viz., that on food, and especially on the holy wafer used in communion, suddenly appeared a drop of blood, or rather of red coloring matter, simply depends upon the decomposition of animal and vegetable substances produced by the same micrococci (Monades prodigiosæ, Ehrenberg). Many other discolorations brought about in moist air on potatoes, cheese, boiled eggs; etc., all originate in the action of micrococci; while the bluish and yellowish tint sometimes assumed by milk, and the green and blue color of pus, are produced by rod-bacteria.

But the researches of modern times have demonstrated the fact with positive, undoubted certainty, that the activity of bacteria is not limited to the decomposition of *dead* organic substances, but that it also extends its fiendish power to the destruction of the processes of life of the highest organized beings—the human race and the animals nearest to it. Amongst many innocuous schizomyceti, there are some pathogenic kinds, which not only live and easily propagate in the interior of the living organism of warm-blooded animals, but which even seem to find there their only conditions of existence.

Many years ago the suspicion was awakened that some of the infectious diseases are caused by living organized poisons. It is remarkable that in 1840 Henle published in his work a series of logical deductions, based upon scientific facts, by which he proved the necessity of a *contagium vivum* being the pathogenic cause of infectious diseases. What he then supposed, to-day is proven.

But a new impetus was given to these researches, when facts became known which showed that parasites were far oftener responsible for morbid conditions than had ever been dreamed. Certain diseases of the skin and of the mucous membranes (as favus, herpes tonsurans,

aphthæ, etc.), were proven to be caused by parasites; and Virchow finally demonstrated that a very dangerous internal disease, trichinosis, hitherto supposed to be due to a miasm, was produced by the immigration of a highly organized animal organism, the trichina spiralis.

As logical conclusions, based upon scientific data, pointed to a contagium vivum, and as the definite proof had been adduced of parasites acting as morbid agents in and upon the human body, the idea more and more took hold of the medical profession, that in every infectious disease a living contagium was the pathogenic element. And during the last decade—especially, however, during the last two or three years—discoveries have been made, establishing the correctness of this view.

The first discovery of this kind Pollender and Brauell made, independently of each other, by detecting peculiar small rods in the blood of animals and human beings suffering from anthrax. Thanks to the labors of Davaine, Bollinger, Klebs, Pasteur, and especially Koch, it is now generally recognized that these small rods are genuine bacteria, species bacilli, and that they are really the pathogenic cause of anthrax.

Investigators next succeeded in demonstrating the constant presence of certain bacteria in all morbid processes belonging to the great group of septico-pyæmic diseases.*

Obermeyer then showed the presence of innumerable screw-bacteria in the blood of persons suffering from relapsing fever. This fact made a profound impression upon investigators, and from all sides proofs were soon adduced. As further acquisitions, definitely proven, may be considered the discovery of lepra-bacilli by Hausen and Weisser, of the typhoid-bacilli by Klebs, Eberth, Koch, of the tubercle-bacilli by Koch and Baumgarten, and of the bacilli of glanders by Schütz and Israel. These micro-organisms can be easily demonstrated in recent cases, if the methods of research described by their authors be employed; and their constant occurrence in the diseases mentioned is generally acknowledged.

All these discoveries had been made, when the outbreak of cholera in Egpyt and Calcutta gave scientists an opportunity carefully to investigate this disease. The German government sent a commission to the infected regions. At the head of it was a man already well-known in science as the most eminent authority on bacteriology, Koch, and he at once employed all his energy for that one purpose. It will here be necessary for me to explain to you some of the difficulties which have to be overcome in these investigations.

Most bacteria so greatly resemble each other in their shape, that only the most expert, and he not always, can recognize the species. For instance, those causing glanders, the fatal disease of horses, those of tubercle, of anthrax, and of cholera, at some time or other have nearly the same shape. One appears a little thicker, another more rounded at one point, a third slightly longer; but if we remember that they are about the $\frac{1}{1000}$ of an inch in thickness, and the $\frac{1}{500}$ of an inch in length, we may imagine how slight the difference must be, when one is an immeasurable bit smaller or thicker. Whoever, therefore, thinks that all that is necessary to discover a specific bacterium in any disease is the microscopical examination of the diseased tissue, will make a great mistake. For in most cases not only one but several species of these microbes are met with. Whenever a specific bacterium has invaded the tissues and caused inflammation, and when later decay and mortification set in, the processes last mentioned are caused by other micro-organisms, which soon deprive the specific microbe of its vitality. It is thus that nature sets a limit to their ravages. We usually find, therefore, the specific microorganism pure only in very recent cases of infectious diseases. Then, if the bacterium has selected as its favorite seat the intestines, we have another difficulty to overcome; for in the bowels are normally met with different species of animalculæ, which are, however, innocuous.

The first difficulty, therefore, is to determine which of the bacteria observed is the specific one. When we have succeeded in this, the important question arises, is it really a new and specific bacterium, or some variety already known? It would have been impossible even to arrive at a decided result in this respect, and the science of bacteriology would still be where it was ten years ago, had it not been for Koch's discovery of pure culture. This process is as follows:

A soil composed of gelatine, of which it is known that it is perfectly aseptic, *i. e.*, completely free from any micro-organisms, is placed on a convenient glass plate, or in a reaction-glass, such as are used for chemical analyses. Upon the surface of this fertile soil the suspected bacteria are spread, and their development is then watched. It has been discovered that every species grows under different conditions and in a different man-

*Introductory of Prof. H. Engel, delivered in the aula of the Medico-Chirurgical College, at the opening of the Winter Course, October 6, 1884. Reprint MED. AND SURG. REPORTER, October 12, 1884.

ner. For instance, one kind will develop only under a temperature of 101° to 104°; another one will lose its vitality if exposed to a greater warmth than 99° Fahrenheit; again, another will not at all multiply except on a certain albuminous soil, consisting of the serum of the blood; another must have the white of an egg; another, beef-tea; another the starchy base of a potato, etc., etc., before it can ripen. Then the various methods of coloring employed by microscopists to show plainer certain micro-organisms, so that they may be distinguished better from cells and other parts of the tissues in which they reside, act in a very different manner upon the various species. Thus, for instance, the bacilli of glanders, tubercle, and anthrax look alike, and they are stained by the same coloring material; but while those of anthrax take on the coloring without difficulty, those of tubercle and of anthrax have to be exposed to its influence for a considerable length of time. Then the bacilli of anthrax after having been thus stained, easily again yield their color under the influence of acids, but those of tubercle resist even the action of sulphuric acid. I mention these instances to show how, in the case of the micro-organisms causing tubercle, of those producing anthrax and of those giving rise to glanders, a distinction between them can be made only after their behavior under the influence of coloring material has been determined.

But neither the knowledge of the soil in which they grow, nor that of the conditions most favorable to their development, nor that of their response to the action of dye-stuffs, is sufficient to establish in every case the identity of certain bacteria. To enable us to do so, we must practice Koch's pure-culture method. From the soil in which the various micro-organisms taken from the diseased tissue were allowed to mature, the one bacterium is removed which we wish specially to examine. Under the strictest aseptic precautions, taking care that no other microbe present in the atmosphere may be accidentally mixed with the micro-organisms under investigation, the special bacterium is carried to a soil which seems specially adapted to its development, a fact which has often first to be determined by a long series of observations. Upon this soil the behavior of the microbe is studied, and experience has shown that every pathogenic bacterium develops in a different manner, but each species always in the same. After from two days to three weeks—thus greatly varies the time in the different species—there appears at the point of the soil where the bacteria had been deposited, a small elevation or depression, either of the shape of a circle, or of a star, or of some other form. Around some of them the soil is dissolved and has become fluid: others present the appearance of dry scales, and their environs are dry. Not two species of bacteria develop alike. Remember that they all probably belong to the vegetable kingdom; they are plants, and behave as such.

From this short description you will have obtained some idea of the difficulties which have to be overcome in the searching after a special pathogenic micro-organism.

When Koch arrived in Egypt, he and his assistants at once commenced to make post-mortem examinations of the bodies of cholera patients. But notwithstanding the most careful dissections and microscopical examinations, neither in the blood nor in the tissues of these bodies was any specific micro-organism detected. Koch then examined the discharges and the contents of the bowels of cholera patients. There he thought to discover what he was looking for. Certain bacteria, which his experienced eye at once recognized as a species characterized by a form and behavior differing from those of any known to him, always reappeared in the contents of the bowels and the discharges of cholera patients; and the more recent the case, *i. e.*, the more rapidly death had taken place, the more numerous were these bacilli, and the less were they accompanied by other micro-organisms.

But it was not until Koch had arrived at Calcutta that he found an opportunity to dissect several bodies of patients who had died within one hour after having been seized by the first symptoms of cholera. In these cases, the contents of the intestines showed the same characteristic bacteria in their pure culture and in enormous quantities.

Koch at once began the necessary bacteriological investigations. In consequence of their peculiar form, greatly resembling a comma, he gave them the name of comma-bacilli. When subjected to the process of artificial pure-culture, he soon discovered that the comma-bacilli behaved in a manner utterly at variance from that of any other known species of bacteria. At the place of deposit there first appears a grayish speck of the size of a pin's head; under favorable conditions this happens within forty-eight hours. Then the gelatine surrounding this spot becomes completely fluid and a depression shows itself, which has somewhat the form of a funnel, and extends deeply into the gelatine. This peculiar behavior

has not yet been observed in any other species. Koch then endeavored to determine other conditions for its existence, and he found that the comma-bacillus, if deprived of moisture for several hours, loses its vitality, though it may regain its power of reproduction, if then once more exposed to influences favoring its multiplication. But if the bacillus was kept without moisture for a period of twenty-four hours, it was destroyed forever and never again obtained its power of reproduction. His experiments, a description of the details of which could occupy hours, further proved to Koch that the comma-bacillus of cholera did not have a permanent existence—a Dauer-Zustand—which fact, taken together with the inability of this bacillus to live without moisture, explain to us an observation which was made before the discovery of the comma-bacillus. Cholera, when it has broken out in any locality, rages there for a certain time, but if once the epidemic has ceased, it will not reappear in the same district without its having been re-introduced. For instance, small-pox, if epidemic one winter in a city, may have apparently ceased, and none of the inhabitants may fall a victim to it during the following summer. But in the ensuing winter it may once more break out with a vehemency even greater than at first. Such is never the case with cholera; after it has once abandoned a locality the region cannot again become infected except by another epidemic of the same disease. This fact is now explained by Koch's great discovery; the bacillus having no permanent, only a transient existence, its germs cannot lie concealed in the ground or out-of-the-way places to regain their vitality under recurring favorable conditions; having once ceased its manifestations, it does so forever.

Another behavior of the comma-bacillus has still more importance. It can exist only in the intestinal canal, and here only in the small and large bowel. It can only be swallowed, and not inhaled. This is the reason why we never have any lung complications in this disease, and why there is no danger of infection by the atmosphere. The bacillus attaches itself and keeps its vitality only where there is moisture. It is not propagated by the air, in which it could not exist. This explains to us the fact that the disease has always wandered from place to place with the slowness, or rapidity, if you will, of human intercourse. Certainly, the burning of fires, the disinfection of the air, and the exclusion of dry articles of commerce coming from an infected district, are all based upon erroneous suppositions.

The most important fact elicited by Koch was the action of acids upon the comma-bacillus. Koch found that this pathogenic microbe could not live in any fluid of an acid character, and that the stronger the acid the more dangerous it is to the existence of the morbid agent of cholera. In consequence of this indeed important discovery, Koch demonstrated that the comma-bacillus could not pass alive through the *healthy* human stomach. Investigating the mortality records and the reports sent to him from physicians that had enjoyed a great experience in cholera-epidemics, Koch found that not a single individual in possession of a healthy stomach had ever been attacked by cholera; but persons suffering from defective digestion, either in consequence of their having passed through such diseases as typhoid fever, or on account of a chronic malady, or because of an error in diet, were invariably the victims of Asiatic cholera. There is still another fact confirming the truth of these observations. It had long attracted the attentions of statistics, that especially in large European cities infected by the epidemic the greatest number of deaths from this disease always happened on Mondays, and amongst the lowest class of people. If we remember that these people in Europe usually commit their worst excesses in eating and drinking on Sundays, so that the Monday attack of indigestion has become almost proverbial amongst them, we cannot wonder that the most virulent cases of Asiatic cholera should happen on that day. For the normal secretion of the stomach, the gastric juice is the only one of the digestive fluids having an acid character, and the comma-bacillus cannot exist and pass alive through the healthy organ. It matures and multiplies in the intestines, but to do so it must reach the bowels in a live condition, and as it can penetrate thither only by way of the stomach, if this secrete the normal acid juice, the comma-bacillus will receive its death-blow in that same fluid. Should, however, from some diseased condition this gastric juice have lost its acid, germicide character, then the morbid agent of cholera will pass on without any impairment of its vitality, to the regions specially favoring its development.

One other fact proves the correctness of this theory. In the last London cholera epidemic the city was divided into small districts, in each of which a dispensary in charge of an able medical staff attended to the cholera patients. By an accident it was discovered that sulphuric acid, if administered in diluted state in the prodromic stage of cholera-diarrhœa, not only at once put a stop to the diarrhœa, but also protected the indi-

vidual against the outbreak of the graver disease. What had then been determined by empirical observations Koch gave a scientific basis, and we can now see the reason of the beneficial action of sulphuric acid. In persons with a perfectly healthy stomach the comma-bacilli, though they may be and probably are often swallowed with the food we eat and the water we drink, are at once killed on entering the main organ of digestion, and they thus give rise to no disease. In individuals where either the quantity of the swallowed bacilli is too great, or what is far more probable, where in consequence of an error in diet or of some slight morbid condition, the secretion of the gastric juice is sufficiently interfered with, not to be able totally to destroy the bacilli, but not sufficiently to allow them to escape totally unhurt, the micro-organisms have lost some of their vitality, and therefore give rise to the disease in a milder degree, and are then easily acted upon by remedial agents, though if left alone they may gradually regain their normal vitality, and then ultimately produce the most alarming symptoms. Only thus can we explain those cases where the epidemic disease first begins with a rather mild diarrhœa, and later assumes the gravest aspect, if the diarrhœa be not early attended to. On the other hand, in persons whose disturbed condition of the stomach makes the gastric juice inert as far as its influence upon the comma-bacilli is concerned, these microbes reach the intestines in their full vitality, and thus developing without impediment, under circumstances most favorable to them, they give rise to Asiatic cholera in its most virulent form.

Lastly, we also now have an explanation of the fact that the epidemic disease causes the greatest ravages amongst the poorer classes, and in the most neglected districts of large cities. Such people, who are in the habit of eating unripe fruit, who enjoy a warm meal but once a week, if that often, who generally drown their misery in the worst kinds of alcoholic stimulants, who do not care whether the meat they eat has an unsavory odor, or whether the vegetables they swallow are partially decayed—such people, I say, mostly suffer from a disordered state of digestion, their gastric juice is wanting in quantity and deficient in quality, and thus the comma-bacilli pass unharmed through that organ whose normal secretion in the healthy state is the most efficient barrier to the destructive influence of the morbid agent.

It was formerly thought, and is still thought to-day by those not knowing better, that the filthy condition of the houses, and especially of the water-closets, was mainly responsible for the greater number of victims of cholera in such localities. But not only do the facts regarding the state of digestion of these people, and the kind of food they use, fully explain the predilection of the disease for them, an observation of Koch directly proves that the filthy condition has very little to do with cholera. Koch noticed that the bacteria of putrefaction and decay are natural enemies of the comma-bacilli. Wherever these are collected in large numbers and in full activity, they soon lose their vitality and finally die, if septic bacteria become added to them. Koch has demonstrated this fact even in the bodies of cholera patients. Whenever the comma-bacilli pass unharmed and in large numbers through the stomach and reach the intestines, they seem to develop like other pathogenic bacteria a special poison, which like the ptomaines at once overwhelms the human organism and thus cause death within an hour, under the symptoms of the most profound intoxication. At the post-mortem of persons that have died thus suddenly of cholera, the bowels are filled with innumerable masses of comma-bacilli in their pure culture, without the admixture of other bacteria; and if one drop of the fluid surrounding them is injected into the circulation of an animal, this dies at once under the symptoms of deep intoxication.

If death does not take place thus rapidly the mucous membrane of the intestines becomes inflamed, and in this tissue and in that of the tissue beneath and that surrounding the solitary glands and Peyer's patches the comma-bacilli are met with in every stage of development. But if life is still more prolonged, so that death sets in at the end of a week, the tissue hitherto inflamed appears mortified. Deprived of its nutrition, as the places surrounding the capillary vessels are so filled with comma-bacilli that they compress the blood-vessels and cut off the supply, the tissues decay, and at once another species of bacteria, the so-called septic, or bacteria of putrefaction, show themselves.

Henceforth the further progress has been studied from day to day by post-mortem examinations of bodies, where the patients died on the seventh, eighth, ninth or tenth day, and so on. Here Koch made the important discovery, that day by day the septic bacteria increased in numbers, and encroached more and more upon the comma-bacilli, which finally were overwhelmed, as it were, and suffocated by the superior numbers of the septic bacteria, until finally comma-bacilli were met

with no longer. There were cases where the symptoms of cholera had ceased and yielded to those of a low typhoid condition—a septic fever.

While these observations thus explain the symptoms observed in the disease, they have led to another far-reaching conclusion. The discharges of cholera patients are usually emptied into water-closets, where decay and putrefaction are continually and actively carried on by septic bacteria. Left to themselves the comma-bacilli present in these discharges and contained in the water-closets, are soon overpowered and destroyed by the septic bacteria. It is at least doubtful, therefore, whether the disinfection of water-closets, as usually practiced, will not tend to favor the propagation of the comma-bacilli rather than to destroy them. In Toulon, and recently in Paris, observations of this character have been made. When the disease broke out in these cities, and as usual attacked mainly the poorer classes, the most active disinfection was practiced by the authorities in these localities. But not a little were they amazed when they discovered that the disease seemed to appear with renewed energy, and increased its virulence rather than diminished it. While we, therefore, should take care to prevent the accumulation of filth and similar moist material in the streets and houses, as the comma-bacilli develop best where there is moisture, we should not be too hasty in our efforts of disinfection, especially as regards the places into which the discharges of cholera patients are dumped.

While Koch was in Egypt and Calcutta, he made two observations, which explain the manner in which the Asiatic cholera is often propagated, and which, at the same time, prove the correctness of Koch's theory, as they really amount to self-inoculation. In a village in Egypt, some eight miles distant from the nearest infected place, and thus far free from cholera, one day the epidemic broke out, and in about thirty families many a one fell a victim to the disease. A careful investigation was started, and it was discovered that the members of these families had all been drinking water from a certain brook. Two days before the outbreak of cholera in the village a washerwoman had brought from the neighboring infected city a large amount of linen of cholera patients, and washed the same in that very brook.

In a southeastern direction from Calcutta, where then cholera raged, several villages were situated, in which no case of cholera happened until one day, in the village the most central of the others, about 200 individuals were suddenly taken sick with the disease, and died. There, also, careful investigations were made, and it was discovered that all those persons had been supplied with water from one special tank. It leaked out that several women who had received the linen of cholera-patients from Calcutta to have it washed, had thrown this linen into the tank and there washed it.

In both cases, the water—in the one, that of the brook, and in the other, that of the tank—was examined microscopically. Any small organic substances, as small splinters of wood, etc., taken from these two waters were found to be literally covered with innumerable comma-bacilli in the most perfect state of pure-culture.

Koch, on examining soiled places of cholera linen, invariably discovered in them living comma-bacilli as long as the soiled places were moist; but whenever such a place had been completely dry for twenty-four hours, all the bacilli were dead. The same was the case with the discharges of cholera-patients.

I have thus far tried to prove to you that the comma-bacillus is a species of its own kind, possessing certain characteristic peculiarities not owned by others of the same genus, and that these peculiarities coincide with what we know of those of the morbid agents and the manifestations of cholera. Notwithstanding the facts and observations quoted would alone be sufficient to prove these bacilli the pathogenic element of the Asiatic disease, I have yet to mention two others ere the actual scientific proof may be said to be clearly established.

It must be demonstrated that the comma-bacillus is not met with in any other infectious disease. Koch, with all his experience, says that he has never found it except in cholera. But, a a few months ago, two German observers thought they had discovered the same bacillus in the disease known as cholera morbus. I have received Koch's reply, which he published a few weeks ago in one of the best German medical papers, and which has not yet appeared on our side of the Atlantic. In this reply Koch proves that the two anthors were not acquainted even with the rudimentary knowledge necessary for these investigations; and he then shows that the bacillus which they detected, and which they considered the same as the comma-bacillus, is a totally different variety, and was not even contained in the discharges which they procured from their patients, but was an accidental admixture from the atmosphere, the two authors not having employed the necessary precautions to exclude such an oc-

currence. As this was the only case where the comma-bacilli were said to have been found present in another disease, we may take it for granted that they are met with only in Asiatic cholera.

But the final proof is the direct infection. For a long time Koch did not succeed in producing genuine cholera in animals by injecting comma-bacilli into their circulation. He explained this failure by the well-known fact that there are some diseases which affect only the human being, and cannot be communicated to the lower animals. Had he but thought of his own discoveries, he would himself have tried the experiment in a different manner, and obtained success. You will remember that Koch never found the comma-bacilli in the blood or in any other organ but the intestines of cholera patients, and that he himself proved that the comma-bacillus cannot pass the healthy stomach. It was, therefore, to be foreseen that the introduction of the comma-bacilli into the circulation of animals would not produce the symptoms of cholera, as this micro-organism does not develop in the blood. Neither could any result be expected from swallowing. All animals that, like the human being, have a stomach prepared to digest alike meat and vegetable food, usually enjoy a very healthy stomach, as they do not expose it to the same rough treatment that human beings are apt to subject their main organ of digestion to.

Professors Rietsch and Nicati ultimately succeeded, during the Marseilles epidemic, in producing in animals the characteristic symptoms of cholera, by injecting the comma-bacilli which had been obtained by artificial pure-culture into the duodenum, that is, the upper part of the small intestines, so that the bacilli had not to pass through the stomach. I have received from Koch the latest and most direct information a few days ago, that these experiments were repeated in the German Imperial Board of Health. Dogs and guinea-pigs were employed for this purpose. Koch first artificially developed the bacilli by pure-culture. He then so diluted the fluid of the pure-culture that he obtained the one-hundredth part of a drop of it, and this minute quantity he injected into the duodenum of a large number of animals. They all died within from one-and-a-half to three days under all the symptoms of Asiatic cholera. Their post-mortem examination revealed exactly the same condition of the intestinal canal that is met with in human bodies of patients who died the second or third day from the disease, and in the intestines were found innumerable quantities of comma-bacilli in the state of pure culture. Considering the smallness of the dose employed, and the fact that death set in two or three days later, the possibility of poisoning is excluded.

The final proof that the comma-bacilli are really the causing element of Asiatic cholera has therefore been adduced. It might interest you to know that the foremost of America's physicians, Prof. Austin Flint, in New York, has also declared himself convinced of the truth of the discovery.

At last medical science is in the condition to become the real benefactress of the human race. It would lead me too far to-night were I to mention all the possible consequences, all the probable results, all that we can learn from this discovery. I may do so with your permission at some future time. But that you may know how to visit with safety cholera patients, and to live amongst them, let me tell you what the king of Italy did. While the disease was at its height in Naples, he arrived from Rome and visited the cholera hospitals in Naples. He escaped uninfected, but why? All his food, and all the water and wine he drank, were sent to him from Rome in sealed and hermetically closed bottles and boxes. As he could not become infected by way of inhalation, but only by the food and water swallowed, care was simply taken to have the food and drink pure, free from comma-bacilli. Should the cholera visit us, have your main organ of digestion in the best possible order, avoid errors in diet, live on the plainest food, and have every drop of water you drink, every particle of food you take, thoroughly boiled, and you will escape all danger from infection. And, if notwithstanding these precautions, living comma-bacilli reach your intestines, and indicate their presence by the first symptom of the mildest diarrhœa, at once have recourse to your physician, and putting yourselves under his care, minutely follow his directions, and the once-dreaded disease will soon become a matter of little concern to you personally.

# Hospital Reports.

## NEW YORK HOSPITAL.

CLINIC OF PROF. WILLIAM H. DRAPER, M. D.

Reported by W. H. SEELYE, A. M., M. D.

### Convulsions.

The first patient shown to the class was a man of about 35 years of age, well-built, muscular, and healthy in appearance, who had been picked up in the streets and brought to the hospital less than half an hour before. He had been in an unconscious condition ever since, and as no one knew anything about him no history could be ob-

tained. He had continued to exhibit, since his admission, the phenomena which were now observed by the class. Immediately upon our entrance into the room where he was lying upon a bed, he went into a convulsion. First, there was a tonic spasm of all the muscles of the body, beginning with the face and then extending to the right arm and leg, and then becoming general. The legs were first drawn up as far as possible, and then were straightened out again, and the same was true of the arms: and it seemed, therefore, that the spasm invaded the flexor muscles a little sooner than the extensors. But after a moment all the muscles of both classes were in a state of rigid contraction, the extensors and pronators of the forearm, however, more than overcoming their antagonists. The diaphragm and the other muscles of respiration were fixed, and breathing was temporarily suspended, and the face was flushed, and the vessels congested and prominent. The pupils were in a semi-dilated condition. After this state of things had continued for twenty or thirty seconds, the rigid contraction of the muscles gradually relaxed, and a clonic spasm began which grew steadily more and more violent, the arms and legs being thrown wildly about, and all the muscles being in a state of convulsion. And now the respiratory muscles were put into a rapid action, and consequently there was loud, stertorous, and gurgling breathing, with violent movements of the chest. This condition of affairs lasted about two minutes, and the spasm gradually lessened, and then as the muscles were relaxing the urine was passed involuntarily. The pupils were now examined and found to be more contracted than they were during the spasm. The patient had scarcely become quiet after this attack, when a second one began, with a very severe and long-continued tonic spasm. In this one opisthotonos was a marked feature, the patient resting for several seconds only upon the shoulders and heels. As this tonic spasm subsided it was not succeeded by any marked clonic convulsion as in the first attack. So he went on for over half an hour, having one spasm after another, some tonic and others clonic, irregularly, repeated every two or three minutes. During these attacks the pulse was very rapid and the respirations deep and violent, and on one occasion, just as he was entering upon a convulsion, he uttered a loud groan resembling the "epileptic cry." He did not foam at the mouth, but the loud gurgling noise made during the violent respirations proved that there was a profuse mucous secretion in the respiratory passages. That he had bitten his tongue in some of the earlier attacks was evident from the fact that the parts about his mouth were bloody; but the possibility of this accident being repeated was prevented by placing a gag between his teeth.

Gentlemen, you observe here all the symptoms of a violent epileptiform seizure. There is complete convulsion of all the muscles, beginning with a tonic spasm and ending in a clonic spasm; and the pupils, which were dilated during the spasm, contract as it passes off. The involuntary passing of the urine is also a frequent phenomenon after an epileptic seizure. And you notice here that the water is clear and light-colored, and not unfrequently after the attack there is found to be albuminuria. But before you came in his urine was drawn off by a catheter and examined, and it was not found to contain albumen. You observe here that his urethra opens on the under side of the glans. This is a congenital defect sometimes met with, and is called hypospadias.

Now the question arises as to what is the cause of these spasms. I think we may exclude epilepsy pure and simple, inasmuch as in epilepsy the patient is not subject to such frequent repetitions of the convulsions. The convulsions may be very violent, and two or three may occur in succession; but usually after such a discharge of nervous force the patient remains quiet and in profound coma for several hours. But these convulsions would seem to depend upon some cause that is constantly acting. If we exclude epilepsy, uræmia and apoplexy suggest themselves. I told you that the urine has been examined and that no albumen was found in it. This would tend to exclude uræmia as a possible cause; for I think that in the great majority of cases of uræmic convulsions you will find albumen in the urine. But you may get albumen in the urine without its necessarily indicating any kidney disorder. Perhaps the best way of distinguishing between uræmic convulsions and those dependent upon some cerebral lesion is by means of the eye. If they are due to apoplexy, with an effusion of blood upon only one side of the brain, you are apt to have some irregularity of the pupils, while in uræmic convulsions this is not the case. During a uræmic convulsion the pupils are dilated at first and afterwards they become contracted. So if the pupils are symmetrical, the chances are that there is no lesion of the brain with an extravasation of blood upon one side. But in case there is an extravasation pressing equally upon both sides, this rule will not hold good. But if you get a permanent irregularity in the pupils and an irregularity in the movement of the eyes, then you have good grounds for supposing that you have to deal with an extravasation.

Now, this patient is a pretty young man for apoplexy, and his arteries, so far as I can ascertain, are normal in condition, and his pulse is not hard and firm, but is soft and natural. And you may remember that I have told you that apoplexy is apt to occur in people in whom there exists diseased arteries, together with an enlarged heart and granular atrophy of the kidneys. But I do not find any cardiac murmur or enlarged heart here. I think, then, that we may fairly say that the conditions which usually accompany apoplexy being absent, this is not a case of apoplexy, or else if it is, the hemorrhage is so equally distributed on both sides, or is in such a locality as not to act upon the pupils.

But then the absence of albumen in the urine is against the supposition that uræmia is the cause of the convulsions. For in all the cases of uræmic convulsions which I have seen the urine has been albuminous. It is possible, however, that we have here to deal with a case of convulsions produced by alcoholism. But we only come to this result by a process of exclusion. Violent convulsions are apt to occur in persons given to the use of alcohol in excess. There is no odor of alcohol in this man's breath, however.

Now, what are you to do in such a case as this

when you are in doubt as to the nature of the convulsions? This is one of the most puzzling and difficult questions. If he is suffering from the effects of an apoplexy, there is nothing which you can do to relieve the patient. For even though you were to bleed him, you would not be doing him any permanent good. But if the convulsions proceed from uræmia, then you have several courses before you. Undoubtedly, the most prompt and efficient means of relief is by blood-letting; though diaphoresis, catharsis, and diuresis, may also be employed to relieve the system of the poison. But these latter means are too slow to employ under such circumstances as are presented here, where the urgency of the case demands immediate measures for relief. In alcoholic convulsions, however, it is, as a rule, not best to bleed the patient, unless the case is complicated with diseased kidneys. But brisk purgation and diuresis are the best means of relieving the circulation of the alcoholic poison which gives rise to them. Now, I cannot say what is the cause of the convulsions in this case; but as I watch it, I am much impressed with the number and violence of them, and this leads me to think that they may be uræmic. So believing that they are dependent upon uræmia, even in spite of the absence of albumen from the urine, I am disposed to resort to venesection as a means of relieving him. So Dr. K. will now perform this operation and we will watch the results.

*Operation.*—A few turns of a roller bandage were first wound around the arm above the elbow so as to obstruct the venous circulation, and thus render the superficial veins prominent; and then with a scalpel an opening was made into the median vein of the forearm, just below the bend of the elbow, by a single longitudinal incision nearly half an inch long. The blood came away slowly and irregularly, sometimes stopping completely, because the skin had not been cut by the incision directly over the opening in the vein, so the blood coagulated between the vein and the skin, and thus stopped the flow. In this way about eight ounces of blood were taken, and it seemed to lessen the frequency and violence of the spasms at once. And in a few minutes more the patient began to make semi-voluntary movements, such as scratching the buttocks and thigh, which were already scarred with old scratch-marks, and he seemed to be very restless, throwing his arms and legs about. But the true spasms had apparently nearly ceased. The bleeding was checked by pressure over the wound in the arm, and by bandaging it from the wrist to the elbow.

In the case of a colored woman who was brought to the hospital the other day under just such circumstances, blood-letting was resorted to, in the hopes that the convulsions were dependent upon uræmic poisoning. But she died soon after, and the autopsy showed that the cause was really a meningeal hemorrhage. This shows you that the difficulty of making a diagnosis in these cases is sometimes very great, and how easy it is to make an error. But we are justified, I think, in trying to relieve these patients, even though we are in doubt as to the cause of the evil. As to the quantity of blood which should be taken, it is not possible to give any definite rule. You are safe in drawing off from eight to twelve ounces, and I think that if you do not get any relief from the removal of twelve ounces, you are not likely to by taking more; for this is enough to relieve the high pressure of the blood and to diminish the violence of irritation produced by the uræmia. About eight ounces of blood has now been taken away from this patient, and I think it has diminished the heart's action somewhat; for whereas the pulse was very rapid before, it is now very regular, and beats only one hundred and sixteen per minute. There is still some tendency to convulsion about the muscles of the jaws and wrists, but there are no longer any large convulsive movements. As I hold his wrist I can feel every now and then a slight spasm of the tendons of the flexor muscles of the hand. Sometimes under the influence of blood-letting the effect is very marked in restoring the patient at once to consciousness, as well as in promptly relieving the convulsions.

You see now, gentlemen, that the patient is becoming very restless, but these movements are not at all of the same character as those which you saw a short time ago. But they are irregular and semi-voluntary, and such as are not unfrequently observed in patients after an attack of convulsions. To quiet this restlessness I would suggest a small hypodermic injection of morphia. This is itself a remedy which is sometimes used in convulsions, and it has been employed especially in puerperal convulsions. It acts as do chloroform and ether, by allaying the irritability of the nerve centres, upon which the convulsions depend.

**Myelitis.**

The next patient, F. W., is a widower, 54 years of age, a native of Ireland, and has no occupation. Was admitted December 21. Gives no family history. Has always enjoyed good health, and has never had rheumatism or malarial fever. Does not drink malt liquors, but for the past few years he has been accustomed to take three or four glasses of whisky a day. For the last five or six years he has suffered more or less from chronic bronchitis, which is always more troublesome in the winter time. A little over a year and a half ago he contracted a chancre, which was followed by a secondary roseola and a swelling of the inguinal glands without suppuration. And last winter he suffered from a kerato-iritis in both eyes. He was put upon the mixed treatment with mercury and iodide of potassium, and the dose of the latter was gradually increased from ten to thirty grains, which caused vomiting. He has now a slightly-marked squamous syphilide on both of his legs. For the past few months he has been troubled with biliousness and constipation. On the 14th of December he was exposed to the rain and cold, and after he got home he had a chill, which was followed by feverishness and a sweat at night. The next day he found that he could not pass his water; so the following day he had a large quantity drawn off by a catheter. At that time he had no pains in the back or legs. The day before he was exposed he took a cathartic composed of senna and manna, which was followed by a violent movement from the bowels; but he has had none since. On Saturday, the 17th, he observed that his left foot and ankle felt numb, and soon after he found that he could not

move that leg; and sometimes it would feel alternately cold and hot, and he would have creeping and pricking sensations in it. Two days after, the same sensations began to appear in the right foot and leg; and they have been gradually creeping up both limbs, until now the boundary line of perverted or lost sensibility is at the level of the umbilicus. Of late he has noticed a sense of constriction across the back. He has passed no urine naturally since the first day of the attack. The left pupil has been permanently dilated or enlarged since the attack of kerato-iritis. He has no headache. Two or three days ago his bronchial cough became very troublesome again. There is now complete loss of power in both lower extremities. On admission his pulse was 98, respirations 20, and temperature 101.2°. His urine is light-colored, and contains a small amount of pus.

Gentlemen, the history of this case, with its attending circumstances, enables you to judge pretty clearly as to the nature of his malady. There is loss of motion in the lower limbs and diminished sensibility, and there are also some subjective sensations of numbness and formication, and an inability to pass urine, and obstinate constipation. The loss of sensation extends upwards to about a line drawn through the umbilicus, but the limit is a little lower down on the right side of the abdomen than on the left, and while the anæsthesia is pretty complete in the left thigh, yet he can feel a little on the right, and the reflex on the right is better preserved than on the left. There is no paralysis of the sphincter ani, but there is a loss of propulsive power in the intestines, which causes the constipation. Now, what have we to deal with here? It might possibly be a congestion of the spinal cord; but in congestion you would not be apt to get such complete loss of power. Or pressure of a tumor upon the cord might cause these symptoms; but they would then have been more gradual in making their appearance. So the true cause is probably some form of myelitis. But whether it is a transverse myelitis, or one which mainly involves the anterior horns of gray matter, is a question, and it is a question which I think cannot yet be positively answered. But the manner in which this attack appeared is very characteristic of the commencement of a polio-myelits of the anterior horns of gray matter. For in this disease there is usually a history of exposure or fatigue, and then a chill, and fever, and disturbances of sensation, and of muscular action, and not infrequently loss of the power of urinating. The disturbances of sensation and loss of vesical power are, however, temporary in myelitis of the anterior horns. But in transverse myelitis, the loss of power and of sensation becomes more and more marked, and there are finally trophic disturbances and defective nutrition in the paralyzed parts, especially of the skin and the muscular coats of the bladder. The interesting point here is that the lesion seems to have begun upon one side of the cord, and then to have travelled over to the other, thus involving both limbs in the paralysis. Now, it is true it is rather early to get trophic disturbances, if this is a transverse myelitis; yet inasmuch as they are absent now, I am inclined to think that the lesion will turn out to be one of the anterior horns, and not one involving the whole of the cord. And other reasons for my not thinking it to be a transverse myelitis are, that there are no pains at night, such as are usually complained of, and no cramps at night, and no cincture sensation about the waist, while there is a partial restoration of the sensibility of the skin. All these considerations lead me to think that the lesion is for the most part confined to the anterior horns. We shall see.

### Uræmia.

The next patient is Mrs, A. B., 58 years of age, born in the United States, a widow, and employed as a governess. She came to the city day before yesterday, and went to a strange boarding-house. Nothing more was seen of her until she was found comatose lying upon the lounge in her room, and she seemed to have remained in this condition for ten or twelve hours. An empty laudanum bottle was also found in the room. At 7:30 last evening she was brought to the hospital. There had been incontinence of urine while she was lying upon the lounge. Her son-in-law says that she had been ailing for some time, and she had just come to the city for treatment. This is all he knows about her. On admission, her respirations were 24, pulse 103, and temperature 99.8°. As to her physical condition, the pulse was increased in frequency, and there was œdema of the legs and ankles, and some degree of general anasarca. She was in a comatose condition, but there was no paralysis of the muscles. And there were no reflex movements except about the face. The pupils were narrower than normal, and they responded slowly to light. The respirations were shallow but regular. The pulse was full, slow, regular, and firm, when she was found. That there had been a convulsion was shown by the presence of froth about the mouth, but she had not bitten her tongue. Sensation was abolished. A spot of old ecchymosis was found just above the mons veneris and another upon the left tibia. There was a swelling and deformity of the phalangeal articulations. The urine as drawn by a catheter had a specific gravity of 1011, and one-fifth part of it was albumen, and it contained granular and epithelial casts. Yesterday a purge af castor oil and elaterium was administered, and in the evening she was given a hot-air bath to induce perspiration. Later on she had an epileptiform convulsion, with opisthotonos, which lasted about thirty seconds. Then succeeded a state of coma, in which the respirations grew gradually slower and slower, and they almost ceased. At 11 p. m. she became slightly aroused from the coma. Her temperature was then 103.4°. The hot-air bath was renewed, and she continued to sweat. At 12 o'clock midnight the temperature was 103.2°, and at 1:45 it was still 103.2°, and this morning at 6 o'clock it was 101°, and at 9 a. m. the pulse was 102, respiration 28, and temperature 101.2°. At 11 a. m. the dose of $\frac{4}{10}$ gr. of elaterium was repeated. She could then speak a little, but only just enough to say that her name was Ann. Whisky was also administered, and she was cupped over the kidneys. There was also considerable œdema of the lungs, for the relief of which she was cupped. Digitalis was also given, and the urine was again drawn off. The treatment has had but little effect, and

the œdema and the unconsciousness have continued up to the present time.

Gentlemen, here is another case in which, like that of the man man you saw first, the question arises as to the cause of the convulsions and coma. The history here enables you to arrive at a more definite and positive conclusion than in that case. From this we learn that she was in feeble health before, and she came to the city to consult a physician, and then she was found comatose in her room, with the evidences of having had a convulsion, in the froth about the mouth and the involuntary emptying of the bladder. After she was brought to the hospital she had another convulsion, and she has remained in a more or less complete state of coma ever since. There are no signs of any local paralysis, and she moves both sides of the body equally well. There is no facial paralysis, and no difference in the two pupils. They were contracted when she first came in, and were but slightly sensitive to light. But she responded to the test which we have lately used here, and which has proved of some value for diagnosing uræmic from alcoholic coma. That is, by suddenly slapping the patient's face with your hand, there will be some reflex movement in the irides. Besides, the urine was found to be highly albuminous and to contain casts, and this showed the existence of a structural disease of the kidneys. Hence, the diagnosis was comparatively easy. This is not the history of any other than a uræmic coma. But upon examining the patient objectively, we get some further interesting facts. For her hands show evidences of an arthritis in the phalangeal joints, and some also in the tempero-maxillary articulation, and there are some hard deposits in the ears. And I doubt not we would find the same conditions in other joints of the body if we were to examine them. There is complete ankylosis of one elbow, showing that she has for some time been the subject of a gouty arthritis, and it is not improbable that she has gouty or granular kidneys.

Now, you might ask whether in all cases of uræmic coma I would resort to the same measure as I did in the case of the man you saw first. I think not. And I do not think there would be any expediency in doing this here; for you must bear in mind the age and strength of the patient. He is a young man and can well bear the loss of blood, but I would hesitate before bleeding an old and feeble and anæmic emaciated patient. Here resort has been had to the safer method of depuration by means of a purgative of castor oil and elaterium. But there has failed to be any response to this treatment, as is not unfrequently the case. This may be due in part to the insusceptibility of the patient to the medicine, or in the case of the elaterium it may be due to the worthlessness of the drug, different samples of which vary much in power. She was also put in a hot-air bath in order to induce sweating. But there was very little response to this, too. It is probable that no medication will do any good here. Her age is against her, and she has probably a degenerated heart, and altogether she is in no condition to recover from such a severe shock to the nervous system. The œdema which occurred two or three hours ago is not an infrequent occurrence, and it is often the precursor and the immediate cause of death.

# Medical Societies.

## PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Thursday evening, January 8, 1885. The President, Dr. Shakespeare, in the chair.

**Primary Tumor of the Liver in a Child Nine Months Old.**

Presented by Dr. E. O. Shakespeare.

**Aortic Valvular Disease, with Rupture of One of the Leaflets.**

Presented by Dr. Shakespeare.

**Malignant Tumor of the Kidney.**

Presented by Dr. Shakespeare.

**A Large Renal Cyst.**

Presented by Dr. Shakespeare.

[The notes of the above cases have been withheld for future publication, and in consequence, the interesting discussion upon them, in conjunction with the case presented by Dr. Longstreth, must also for the present remain unpublished.—Recorder.]

**Sarcoma of the Clavicle.**

Presented by Dr. G. E. de Schweinitz.

This specimen was sent to me by Dr. John Ashhurst for microscopical examination, and he kindly gives me permission to exhibit it to-night. The tumor occurred in the person of a young girl, S. L. B., aged sixteen, who came to him for treatment last August. She was a somewhat frail-looking, clear-skinned blonde, whose general health up to the time of the appearance of the growth had been satisfactory. The family history was good; none of the other five children composing the family presented any similar affection, nor was there any history of tumor for two generations back. The tumor began at the left sterno-clavicular joint, as a small, nut-shaped swelling, having arisen without known inflammatory or traumatic origin, although, as further stated, they always believed that the patient had in some way, and unknown to herself, received an injury at this point. The growth of the tumor was rapid, and at the end of five months stood out as a prominent swelling, as large as an orange, occupying the inner two-thirds of the clavicle, and was covered by somewhat reddened and thinned skin. Pain, although not constant, was at times a very severe symptom.

On the 7th of last August, Prof. Ashhurst removed the growth, together with the inner two-thirds or three-fourths of the clavicle. Examination of the gross specimen shows it to be a spindle-shaped growth, about four inches long, three inches at its greatest breadth, and two inches deep, which has taken its origin in the medullary cavity of the bone, and gradually become surrounded by a firm fibrous or periosteous capsule. The true tumor tissue is of moderate consistence and a reddish-brown color. Microscopic examination reveals the following points of interest:

The capsule is composed of dense fibrous tissue, from which prolongations pass, dividing the tumor into numerous spaces, which are filled with small round sarcoma cells. These spaces are in many places again divided by a delicate spindle-shaped tissue into small alveoli. In addition to

the round cells, spindle-shaped cells are also seen in spots; giant cells are absent, or at least only a few multi-nucleated cells, relegated to the regions of the spindle cells, are noted. The tumor, I think, should be classified as a small round-celled sarcoma, with an alveolar arrangement. If this tumor be accepted as a variety of alveolar sarcoma, it is somewhat unusual.

Twice before this evening specimens of alveolar sarcomata of the long bones have been exhibited to this Society—one of the femur, by Dr. Nancrede, and one of the knee-joint, by Dr. Formad. At that time Dr. Formad thought the variety of the sarcoma justified a rather more favorable prognosis than usual, while Dr. S. W. Gross, during the discussion, after referring to the somewhat unusual microscopical character of the tumor, thought the outlook for the patient was bad, as this variety of sarcoma is peculiarly fatal. Dr. Formad's prognosis was correct, because in that instance the patient was alive and well, if I am not mistaken, for some time after the operation, and may be now, for aught I know.

In regard to the result of the present case, I am able to speak quite definitely. Although the operation was not successful, and the removal of the growth quite complete, the hemorrhage insignificant, and the recovery of the patient satisfactory, in about two months after the operation the growth reappeared, either in the old wound or about two ribs lower. In this case, then, the truth of Dr. S. W. Gross's remarks has been only too thoroughly proved.

Dr. Shakespeare said that this specimen was of interest on account of the rarity with which similar ones had been presented to this Society. Through the kindness of Dr. de Schweinitz, he had the opportunity of examining sections from the growth, and thoroughly agreed with the exhibitor as to its nature,

Dr. Simes had also examined microscopic sections and endorsed the statements made by the preceding speaker.

### Alveolar Sarcoma of the Kidney.

Presented by Dr. M. Longstreth.

The patient, J. E., æt. nine months, was first under the care of Dr. McOscar, to whom I am indebted for the specimens and this history, suffering from an attack of summer complaint. The patient was at that time three months old, and had been ill for a week or two. He was in a state of great emaciation, and upon examination of the abdomen a swelling was found in the right flank. The little patient recovered from the bowel trouble, but the general condition did not materially improve. During the remaining six months of life, the child was only occasionally under observation, and at those times suffered from paroxysms of pain apparently in connection with the tumor. The bulk of the tumor, as felt through the abdominal wall, did not seem to increase greatly up to his death. The urine was not carefully inspected. Three days before death, the pain increased to great violence, and in this condition death came. The post-mortem examination showed the enlarged right kidney more firmly adherent to the posterior abdominal wall, and to the ascending colon and mesentery, as well as portions of the small intestine attached to its anterior surface. The diseased organ weighed 52 ounces, and presented itself as a rounded, slightly oval mass, regular in outline, smooth of surface, and with a moderately firm elastic consistence. The capsular surface was of pretty dense, shining whiteness, with conspicuous small vessels passing over it. On section—which measured 3½ inches by 2 inches in the two diameters—the tissue presented a very varied appearance. In parts, it was of a dense white, perfectly homogeneous aspect; in others, the pinkish-white mass showed streaks of yellow, with numerous small spots of red, and there were also large blood-red areas. In other parts the tissue was breaking down into cysts, of which several large ones were present, the largest of the size of an English walnut. The cysts were all situated on the periphery of the mass, but they did not cause any protrusion of the capsule. At the upper extremity of the mass, there was found a portion of kidney tissue not invaded by the new formation. On section, this portion occupied about one-half inch of the long diameter of the mass, and was seen to be separated from the new growth by a thin partition of connective tissue; externally it showed itself like a lobule of kidney, fitting like a cap on the spherical tumor, as does the supra-renal capsule on the kidney itself. The microscopical examination showed the new formation to be a small round-celled sarcoma. The greater portion of all sections presented cells nearly rounded in figure, imbedded in a perfectly homogeneous basis substance. The uniform area of cells was, however, interrupted by streaks of spindle-cells running in narrow bands, enclosing greater or less areas of round-cell tissue. These circumscribing bands of spindle-cells sometimes formed circular areas looking like the cross-section of a tube; in other places the bands pursued a very tortuous course, resembling the outline of a twisting, undulating tube, cut in a longitudinal direction. The bands of spindle-cells were never of great breadth, rarely more than four or five spindles. The spindle-cells were not regularly or closely fitted, but were embedded like the round-cell elements, in a homogeneous basis substance. In the spindle-cell bands there were occasionally seen fine capillaries filled with red blood-corpuscles, which sometimes ran along for a considerable length; many other capillaries were seen cut transversely or obliquely, also in the spindle-cell tissue. Many areas of hemorrhage were visible. In many places a scanty fibrillar tissue, with various shaped nuclei, oval, angular, and spindle, was seen. This tissue was thrust in and filled the interstices between the areas of round-cells, circumscribed by the spindle-cell tissue. Thus in the section one passed from areas of round cells to the narrow bands of circumscribing spindles, and then into fibrillar tissue, with open meshes apparently without any inter-cellular basis substance. The whole picture resembled the cortical portion of the kidney, transformed by the presence of a new growth; the lumen of the convoluted tubes, greatly enlarged, were filled with a round-celled homogeneous basis substance tissue; the base-membrane of tubes transformed into spindle-cell bands, and finally areas of hyperplastic inter-tubular connective tissue, in which or along the basement membrane of the tubes

(spindle-cell bands), ran the inter-tubular capillaries. The left kidney weighed five ounces. On section it presented a normal aspect; the capsule separated easily, was not thickened, and the surface of the kidney remained smooth. The microscope showed no alteration of its tissues. The liver was large, smooth, blunt-edged, pale; under the microscope a very high degree of fatty infiltration was found. The other organs showed nothing especial to note. No secondary new formations were found.

Thursday evening, January 22, 1885. The President, Dr. Shakespeare, in the chair.

**Two Cases of Nævus Pigmentosus.**

Presented by G. E. de Schweinitz, M. D.

The first of these specimens is one removed from the face of a patient by Dr. John Ashhurst in the University Hospital. The man was aged about forty years, and the tumor took its origin in an ordinary mole, which under the stimulus either of external irritants or undue manipulation, grew into a slightly-raised mass, with flattened top and constricted base. After Prof. Ashhurst had excised the growth, I made a microscopical examination of it, with the following result: The uppermost portion of the tumor is densely pigmented, and the pigment is further seen to be of a brown or brownish-black color and contained in spindle or round cells, or to exist as free nuclei and granules. These pigmented spindle cells sometimes are arranged so as to form the boundaries of alveoli, which are in their turn filled with moderately-large unpigmented lymphoid cells. The base of the mass shows a small cell infiltrate, enlarged sebaceous glands, and a massing of the epithelium of the part, forming the appearances of squamous epithelioma. Below, the fat and subcutaneous tissue presents nothing abnormal. This growth my be classed, I think, as a hypertrophied mole having an epitheliomatous base.

The second specimen was removed by Dr. Agnew from the back of a man, also a patient in the University Hospital. This tumor developed from a mo.e, and grew as a papilla-shaped excrescence above the surrounding skin level. Microscopic examination of the mass showed it, like the former one, to be composed of a densely-pigmented tissue largely made up of spindle cells and free granules. Among the interstices of these were numerous blood channels filled with corpuscles. No malignant change at its base was noted, and the surrounding skin was normal. Ziegler, in his recent work on pathology, speaks of the not infrequent occurrence of melanotic and alveolar sarcoma in cellular warts and pigment spots; and certainly some parts of the specimens from the first case are strongly suggestive of a sarcomatous structure.

**Urethral Polypi.**

Presented by Dr. de Schweinitz.

These specimens of urethral polypi were removed from a patient with the following history: ———, aged about 30 years, contracted gonorrhœa, which was unusually stubborn and prolonged in its course. The disease had lasted about five months, when I first saw the patient. He was then suffering on account of some imprudence, from a moderately sharp attack of cystitis. Having recovered from this and from the acute symptoms of the exacerbation which had probably caused the cystitis, he returned to his former condition of a drop or two of purulent discharge in the morning, which no treatment seemed to relieve. Suspecting then that the long-standing discharge, the diminished calibre of the stream of urine, and the feeling of weight in the perineum might be due to a polypus, I explored the urethra with an improved endoscope, and found first two and later these three polypi, removed them, and had the satisfaction of seeing a cure follow this treatment. They were all situated within the first three inches of the urethra. I think no doubt these little tumors are papillomas, and belong to the more common varieties of new growths which are seen in the male urethra. A rough examination of them with a pocket lens reveals quite nicely their dendritic formation. Tumors of the urethra, in the male at least, are usually stated to be of rare occurrence; although as Wm. Belfield, of Chicago, has remarked, they may not be so rare as is usually supposed, as the urethra is seldom systematically examined upon the post-mortem table. Belfield himself, in a series of 70 autopsies, discovered two urethral tumors.

**Slides from an Adeno-Fibroma of Lachrymal Gland,**

presented by Dr. G. de Schweinitz.

These sections were made from a tumor of the lachrymal gland which was removed by Dr. Agnew. The growth occurred in a young man was of five years' duration, and painless, having been situated in the upper and outer part of the orbit. The eye was sightless from atrophy of the optic nerve. The tumor, which was about the size of an English walnut, was surrounded by a dense fibrous capsule; the main body of the growth was composed of fibrous tissue, through which the remains of the gland tissue are seen. The epithelium is, in places, in a state of proliferation, but apparently no formation has taken place which could be justly characterized as malignant. The tumor may be classed, I think, as a fibroma or adeno-fibroma of the lachrymal gland.

**Specimens from Excision of the Astragalus for Caries, etc.,**

presented by Dr. C. B. Nancrede.

Elmer ———, æt. 9½ years, had for some years suffered from characteristic symptoms of strumous disease of the astragalus, the details of which it is unnecessary to give. Early in November, 1884, he began to have chills, severe pain in the ankle-joint, which now became swollen, hectic, and profuse diarrhœa. Although I had never been able to detect dead bone by the probe, I felt convinced that an abscess, the result of carious bone, had ruptured into the previously only slightly diseased ankle-joint. I accordingly, under ether, examined the ankle-joint, which I found contained a considerable quantity of very offensive pus, which communicated with a cavity lined with carious bone, situated between the astragalus and os calcis. I excised the astragalus, and scraped out the carious external malleolus, as well as the roughened surfaces of the tibia. The boy has since done well.

Dr. M. Longstreth presented the following speci-

mens, the notes of which, with the discussion, not having been placed in the Recorder's hands as yet, will appear in print at a future time.

**1. A Kidney Preserved as to Color and Texture by Ordinary Illuminating Gas. 2. Sarcoma of the Femur Removed by Amputation,**

by Dr. J. H. Brinton.

**Pyelonephritis and Chronic Parenchymatous Nephritis in the same Patient, Complicating Cystitis,**

presented by Dr. J. Tyson.

E. D——, a prostitute, æt. 25, white, was first admitted to the Philadelphia Hospital September 10, 1883. She was at that time suffering from diarrhœa, and stated that she had previously passed blood—although appparently none was passed after admission. She had no symptoms which attracted attention to the urinary organs, and no examination of the urine was made. The history of the case at present attainable does not show whether or not she had had gonorrhœa. Her diarrhœa disappeared under treatment, but she regained strength slowly. She was discharged October 4, 1883, apparently in fair health, but was readmitted on October 25, 1883. She now presented œdema of the legs and face, and an examination of the urine made about this time disclosed the presence of pus. She complained of pain in the lumbar region and in the head, and was much debilitated. The treatment was directed to warding off a threatened uræmia. The dropsy disappeared, but her other symptoms progressively increased until death relieved her. She died with symptoms of uræmia.

*Autopsy.* — December 2, 1883. Nothing noteworthy in external appearance. Slight pleuritic adhesions, thoracic organs otherwise normal. Abdomen—peritoneum normal; liver normal; spleen not examined. Kidneys: left, typical large fatty organ; right, swollen to more than twice its normal size; when opened found to present a marked pyelonephritis with great distension of the pelvis, the calyces filled with pus—partly fluid and partly inspissated. Bladder was in a condition of chronic cystitis. Cause of death, pyelonephritis with large white kidney.

Dr. Tyson said that the chief interest attaching to the specimens lay in the association of these two very opposite conditions, apparent pyelonephritis, or suppurative interstitial nephritis, with chronic parenchymatous nephritis. The former condition is a well-recognized result of cystitis, the latter not. Dr. Tyson had never before met these conditions in association. Usually, as a result of a long-continued cystitis, however induced, we have a suppurative nephritis of one or both kidneys, but never, so far as he knew, suppurative nephritis. He thought the most reasonable explanation of the association was that of coincidence—that there had existed previously perhaps a parenchymatous nephritis; that upon this a cystitis had supervened, and upon this a pyelonephritis.

Dr. Tyson said that he would like to ask the members whether they had ever found association of these two varieties of diseased kidneys with cystitis. Dr. Formad thought that he had seen one such case, but there was no history. Dr. Osler said that the condition of this kidney is not infrequently met with in persons dying of intercurrent affections, and that he should not interpret the case as previous speakers had done. The kidney disease was probably of many years duration, the cystitis was secondary to it, and the other kidney affected with parenchymatous nephritis had become subsequently diseased. It was well known that the ordinary scrofulous kidney, with pus in the urine, etc., often lasts for many years, ending in general tuberculosis, or inspissation of the pus. He would like to ask how long pus had been observed in the urine, the state of the bladder, and whether there were other findings of tuberculosis in the various organs. [Owing to unavoidable circumstances, a portion of the discussion in which various explanations differing from Dr. Osler's were given, has to be omitted.—Recorder.]

Dr. Tyson replied that he was in the possession of no definite facts as to the duration of pus in the urine. The case had only been under observation for three months, and certainly pus had been detected two months before her death.

# Editorial Department.

## Periscope.

**Malignant Disease of the Kidney—with Autopsy.**

Dr. Edward T. Bruen presented the following case to the Philadelphia County Medical Society:

The specimen under consideration was removed from a man æt. 60, an inmate of the Philadelphia Hospital. The first symptom of his malady was noticed about six weeks before death. When admitted to my wards, he complained of passing pure blood from the penis, otherwise the urine was physiological. He never suffered the least pain; no dullness could be detected in the lumbar region or in the right flank. There was moderate cachexia, indicating the possibility of malignant disease, but little loss of flesh. The hæmaturia continued almost uninterruptedly until death, prior to which malignant disease was confidently anticipated. The right kidney was found to be enlarged, weighing twelve ounces—about one-half its bulk was filled with malignant new formation situated on the anterior portion of the organ. Microscopic examination by the microscopist of the hospital determined it to be an alveolar sarcoma. The tumor was rich in blood-channels, and a part of the bulk of the tumor was entirely made up of clotted blood in a semi-organized condition.

According to Zenker, Schroeder, and others, tumors of the kidney frequently do not arise from the epithelial tissues of that organ. The connec-

tive-tissue origin and character of these growths, and their richness in blood-vessels, would assign many so-called carcinomata of the kidney to the group of sarcomata.

The prominent symptom during life was hæmaturia yet in similar cases the condition of the urine is frequently absolutely negative. Ebstein (Ziemssen Cy.), states that hæmaturia occurred only twenty-four times in fifty cases. Again, authorities unite that long intervals may elapse between the periods of hemorrhage. We can easily understand this, since the cavities of the tumor which contain the blood may not communicate with the collecting tubules even in cases of extensive disease, or the secretion of urine may be vicariously assumed by the other kidney.

I have even met with cases of abscess of the kidney with only an intermittent discharge of pus. We may assume, however, that causeless and painless hemorrhage from the genito-urinary tract is a very suspicious symptom, indicating malignant disease.

Paroxysms of pain may attend the passage of clots of blood through the ureter, quite resembling those of renal calculus.

The rule ordinarily given in hæmaturia is, that blood escaping from the neck of the bladder or urethra precedes the stream of urine, and whenever blood has accumulated in the bladder in considerable quantity, blood-clots will be passed, but the urine first voided will be clear. In the case reported in this paper, pure blood was frequently passed almost unmixed with urine, so that the previously stated rules differentiating the cause of hæmaturia are of relative importance.

Paroxysmal hæmaturia can be recognized not only by its intermittent character, but by the abundance of the blood pigment, combined with the rarity of blood-corpuscles. The color of the urine in this affection is said to be due to hæmoglobin.

The hæmaturia of renal calculus can be recognized by exclusion only, unless renal colic with unilateral localized pain, or some characteristic sediment, be present; the total amount of urine may be diminished very decidedly, but not otherwise altered. Statements have been made by Heller, Moore, and others, that discharges of "floccule of cancer tissue" may be found in the urine in this class of cases. The altered epithelium of the renal pelvis and ureters has, doubtless, been mistaken for cancer cells, because although certain combinations of cellular material may excite suspicion in connection with other symptoms, nothing definite can be asserted from an examination of the urine. Recently, Dr. Julius Wolf (*Deut. Med. Wochenschrift*, September 25), has stated that iodide of potassium is much less readily eliminated by the kidney during Bright's disease than in health, and recommends the use of four or five grains daily for diagnostic purposes. Some observations by a student of the University of Pennsylvania, Mr. Gregory Guiteras, have confirmed the view—the iodine being absent in the urine in cases of disease of the kidney—but was present in abundance in the saliva. At first sight, the test might appear of service in malignant renal disease—but since malignant disease is usually a unilateral process, the test might indicate bilateral disease.

Primary malignant disease of the kidney is not always recognizable by percussion, as was illustrated by the present specimen. The bulk of the growth often projects anteriorly, since the lumbar tissues offer greater resistance. Careful percussion should be made over the lumbar and also the lateral regions; in the latter, percussion should include the space between the lower ribs and the crest of the ileum upward, or forward towards the navel. When tumors of the kidney are very large, and especially when the disease has involved adjacent viscera, the formation may become recognizable anteriorly by palpation, as well as percussion.

These growths are usually adherent to the walls of the abdomen or surrounding parts, and thus become immovable. They may be round and smooth, or nodular and lobulated, frequently giving rise to a sense of fluctuation, or elasticity, on palpation. They are, therefore, liable to be mistaken for hydatid tumors, and may be confounded with tumors of the liver. In case the growth is situated on the right side, the mistake is particularly possible, but the tumor will not rise or fall with the movements of the diaphragm, and the fingers of the hand can usually be introduced under the ribs on the right side.

These growths, when fluctuating, may indicate puncture with an aspirator as a deciding diagnostic measure, which has been practiced. In one recorded case a whitish-red mass of tissue was obtained, in which the microscope showed a delicate connective-tissue stroma, in which innumerable nuclei were imbedded, and the operation was followed by no bad results.

In renal tumors pain is a pressure symptom, and therefore may be present or absent in accordance with the size and situation of the growth. In malignant disease of the kidneys the cachexia usually noticed in such cases is a late symptom, and in cases of sarcomatous disease is never prominent. Malignant disease of the kidney is more frequent in the early and late periods of life, and is rare as a primary disease, but when present, the other kidney is usually unaffected, and it is very seldom accompanied by malignant disease of the lower urinary passages whereas malignant disease of the testicle, is often followed by renal carcinoma.

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### The Treatment of Acne Rosacea.

Dr. Tom Robinson thus writes in the *Brit. Med. Jour.*, January 17, 1885:

That alcohol does produce in some skins all the degrees of acne rosacea is undoubtedly true; but, to associate all cases of the disease with excessive drinking is unscientific and unfair. I know very many most rigidly careful people afflicted with the malady; and the unpopular name for these red spots being "grog-blossoms," in no way diminishes their suffering.

The treatment may be summed up in a few sentences. It is essential that all those who are afflicted with acne rosacea should abstain from all food which is difficult to digest, such as pork, veal, hashes, stews, and uncooked vegetables; and, as a general rule, from wine, beer, and spirits. The face should not be irritated by common soap, and care should be exercised as regards ex-

posure to the wind and sun. The meals should be slowly eaten at regular hours, and the fluid put into the stomach at the end of the meal.

In the first degree of the disease, it will only be necessary to prevent the development of the papules, by applying a lotion, made with bismuth and the glycerine of starch of the *Pharmacopœia*, diminishing the starch by three-fourths.

When the papules are developed, nothing answers so well as a lotion made with two grains of the bisulphuret of mercury in one ounce of almond-emulsion or glycerine of starch, used every night.

When the inflammation is acute, and suppuration is going on, we must, in the first instance, foment the face with hot water (placing a hot sponge over any troublesome spot is a simple and useful plan); and, when the acuteness of the inflammation has subsided, rub in an ointment made with twenty grains of the yellow oxide of mercury in one ounce of lard, and continue this treatment until the inflammatory process has stopped; after which, the bismuth and starch lotion answers well.

Internally, I always rely upon a mixture made with an alkaline carbonate; soda, I think, is best. If there be much inflammatory thickening, I add the solution of perchloride of mercury, or if there be any syphilitic tendency to grapple with, I add the Donovan's solution; if scrofula, cod-liver oil; but internal and external remedies are useless where organization of tissue has taken place. I have never seen an operation performed upon the advanced cases of acne rosacea.

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### Melanotic Sarcoma of the Rectum.

Before the Academy of Medicine, in Ireland, (*Lancet*, Jan'y 10, 1885).

Dr. Ball read a paper on a case of Melanotic Sarcoma of the rectum removed by operation. The patient, a fairly healthy-looking woman, aged sixty years, stated that eleven months before coming under observation she had noticed a pile which had been removed by operation, after which she remained free from rectal symptoms for four months. She then suffered from increased difficulty in evacuating the bowels. A slight discharge of bloody mucus appeared, and she became conscious of a hard tumor in the rectum, which partly protruded on stool. These symptoms continued to increase, and on admission defecation was difficult and painful, the pain being referred to a point immediately above the symphysis pubes. Upon examination the anus appeared normal, and the sphincter was not unduly relaxed. About an inch from the anal verge, on the anterior aspect of the rectum, two distinct and tolerably hard tumors could be felt, evidently implicating the mucous membrane: and by pressing the finger well up the superior limits of both could be readily made out, and below them a smaller mass was to be felt. The rest of the rectum appeared healthy, and no abnormal adhesion of the bowel to the other pelvic viscera was indicated. The mass was extirpated by the usual method on November 1st, a free posterior incision being made to give room. Corrosive sublimate solution, 1 to 2000, was the antiseptic used, and the wound was left open. The after-progress of the case was afebrile and satisfactory. The bowels moved for the first time on the fourth day, and the patient had complete control over the evacuations. The piece removed measured about three inches in breadth and two and a half inches in length, and consisted of the anterior two-thirds of the circumference of the bowel. There were two principal growths, separated by about half an inch of mucous membrane and equidistant from the anus. The larger had a depression in the centre, and was of a whitish color; the other was black on the surface and spherical in shape. Below the two principal tumors a smaller nodule, also black in color, was to be seen. A section carried through the two larger growths showed that the lighter colored one was of the same hue throughout, except where a small blood-clot existed in the interior; but the second was of a sooty black color, as seen on section. The shape and arrangement of cells were similar in both tumors, being those of a typical sarcoma. The cells were round, ovoid, or even spindle-shaped, with large nuclei, and in some portions resembled a form of alveolar sarcoma. In the larger one there was a very slight amount of pigment, but in the smaller pigmentation was extreme, some of the cells appearing as large masses of blackish material, while others had dark granular material, more sparsely scattered in their substance. In the portion of mucous membrane between the two growths the glands were much atrophied and surrounded with lymphoid tissue.

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### Nephrectomy in Infants and Children.

The *Med. News*, January 24, 1885, says editorially that at a recent meeting of the Clinical Society of London, the proceedings of which are recorded in the *Brit. Med. Jour.* for November 1, 1884, Mr. Godlee read a paper on a case of abdominal nephrectomy for sarcoma in a boy twenty-two months of age. The removal was accomplished without any difficulty; the cure was uninterrupted by a single bad symptom; and the child was discharged in six days. In six months, however, recurrence took place in the right iliac fossa; the tumor rapidly increased in size, passing down into the scrotum; and death ensued soon after.

Mr. Godlee, in his comments on the case, mentioned eight other examples of extirpation of the kidney for morbid growths in subjects of tender years. Including his own, the nine cases show that five died of the immediate results of the operation, three recovered, bnt died subsequently of a recurrence, while one was well when last heard of. Despite these unfavorable results, and in view of the hopeless condition of these patients if left alone, he argued that attempts should be made to remove neoplasms at an early stage; but, at the same time, plead against interference when the growths had attained a large volume.

Unless we greatly mistake, the weight of opinion is against nephrectomy for tumors in children, and we believe that the majority of surgeons will endorse, so far, at any rate, as sarcoma in early life is concerned, the view expressed by Mr. Henry Morris, in the fifth volume of the *International Encyclopœdia of Surgery*, which has just been issued from the press. He says: "It is probable that

future experience will exclude from the category of cases for which nephrectomy, by any method, should be done, tubercular disease, and renal sarcoma in children, as well as cancer at any period of life."

We have before us the notes of eleven extirpations of the kidney for neoplasms in children, ten being for sarcoma and one for adenoma, an analysis of which shows that the operation has thus far been of the most disappointing nature. It may be mentioned that the surgeons were Hueter, Jessop, Kocher, Czerny, Hicquet, Rawdon, Réczey, Little, Ollier, Sir Spencer Wells, and Godlee. Of the entire number, eight perished from the immediate results of the operation, thereby showing a mortality of 72.72 per cent., and three recovered, namely, the cases of Jessop, Hicquet, and Godlee. Ten of the operations were by the ventral incision, of which eight died; and one was by the lumbar incision, which recovered. Of the three recoveries, the patient of Hicquet remained well at the expiration of three months, the date of the last report; while the disease recurred, respectively, in six and nine months in the cases of Jessop and Godlee.

It will thus be seen that the immediate mortality was 72.72 per cent., and that the disease returned in 66.66 per cent. of the recoveries. In addition to this gloomy record, we have, however, to state that the operation does not prolong life, since the average duration of life was fifty days, as against an average life of between seven and eight months in the same class of subjects, when the disease is allowed to pursue its natural course.

While we are of the opinion that nephrectomy is unjustifiable in children the subjects of renal neoplasms, further experience may show that Mr. Godlee is right in asserting that interference is proper in the early stage of the affection, particularly as Kühn states that secondary growths are found in only 28 per cent. of sarcomata of persons of tender years. But when we consider that these cases rarely come under the observation of the surgeon until the tumor has attained a considerable volume, it can scarcely be expected that the future will show better results than those now recorded.

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**Apparent Recovery from Locomotor Ataxia.**

Dr. J. L. Crawcour reports the following case in the *New Orleans Med. and Surg. Jour.*, Dec., 1884.

Mr. B., aged 45, came to see me September 11, 1883. Until about a year ago, was in moderately good health, when he first noticed some difficulty in going up stairs. He then had darting pains in the legs, which gradually became more intense. By degrees he became weaker and more unsteady.

At present, he looks pale and is somewhat thinner than usual. His walking powers are very weak, and he cannot move about without assistance. In order to go up stairs, he has to crawl on his hands and knees, and to come down he has to go backwards in a similar way, assisting himself by his hands.

He has had several bad falls. In walking, he knocks his legs about; his feet feel as if a thick piece of felt was between him and the floor, and the least fatigue rapidly exhausts him.

Any mental effort and reading produces a sense of confusion in the head, and he has occasional attacks of vertigo. The patellar tendon reflex is abolished. Asked to walk or stand with his eyes shut, he would have fallen had he not been supported.

There is some diminution of tactile sensibility in his legs, as tested by the æsthesiometer.

Passes urine more freely than natural. No albumen or sugar. Sexual desire and power much diminished. Examined by the galvanic and Faradic currents, the reactions were normal, showing that the grey matter of the cord was not involved.

The diagnosis was chronic inflammation of the posterior root-zones of the cord producing sclerosis.

The treatment which was commenced on the 11th of September, consisted in the application of the galvanic current down the spine. The anode at the second cervical vertebra, the cathode at the last lumbar. The current was derived from 35 Lechlanché elements equaling 47 gravity cells and was passed through a water rheostat, until it gave a constant deflection of the needle of a large galvanometer of 40°, including the external resistance of the body. The current (stabile) was applied for ten minutes daily.

The medicinal treatment consisted in the exhibition of the nitrate of silver commencing with the one-sixth of a grain three times daily gradually increased to one-half grain. This was interrupted every three weeks for a week, in order to avoid staining the skin. The electric brush, with a strong secondary Faradic current, was applied a few times down the spine, but the pain was so intense it had to be discontinued, and I substituted the revulsive action of the thermo-cautery, applied twice a week on the side of each vertebra, as the application was made very rapidly, the pain was very slight.

At the end of three weeks of this treatment, he was able to walk with the help of a stick; at the end of six weeks, he was able to go up and down stairs, and at the end of ten weeks, he went home almost well. I advised him to procure a Mcintosh galvanic battery and use it daily, and also the nitrate of silver for two months longer.

He is now perfectly well and without a trace of disease.

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# Reviews and Book Notices.

## Notes on Current Medical Literature.

——In a reprint before us discussing the operation of tracheotomy, Dr. Joseph E. Winters maintains that this surgical procedure, if properly performed, involves little danger to life and for many reasons should be resorted to much more frequently than is now the custom.

——A successful case of relief of a distended frontal sinus by interior local treatment is reported by Dr. C. J. Kipp, of Newark, N. J. In a paper from the Transactions of the American

Ophthalmological Society, he makes the important observation: "Attempts to empty the sinus through its obstructed or closed passage into the nose by digital pressure on the swelling should be made from time to time, and after the sinus has been once emptied it should be evacuated at short intervals. If, after a fair trial of this treatment, the distension continues, the old method of treatment may be resorted to."

——The address in medicine, by Dr. W. H. Daly, before the Pennsylvania State Medical Society, has been issued in neat pamphlet form.

——The National Temperance Society of New York, has republished Dr. B. W. Richardson's inaugural address, entitled "The Medical Profession and Alcohol." As is well known, Dr. Richardson is a teetotaler, and strongly urges the profession to join him and his party in what he calls "the supreme effort which is now being made, with every prospect and certainty of ultimate success, to rid the world of the slavery of superstition, folly, sin, sorrow, madness, and death that has for ages past been imposed upon the world by the use of alcoholic drinks."

## BOOK NOTICES.

**The Science and Art of Surgery. By John Eric** Erichsen, F. R. S., LL. D., etc., eighth edition. Revised and edited by Marcus Beck, M. S., etc., vol. II, pp. 1205, Philadelphia, Lea Bros. & Co., 1885.

Not long ago we announced the appearance of the first volume of this highly esteemed work. The present issue completes it, and presents to the student a most valuable treatise, and to even the best-read surgeon a mine of information in which he will be sure to discover something which he will be glad to learn. In these compact volumes all the acquisitions of modern surgery are carefully recorded, and appraised with the skill of a master. Nearly a thousand illustrations enrich the pages, and add much to the interest of the text. An excellent index completes the second volume.

**A Handbook of Pathological Anatomy and Histology,** with an introductory section on post-mortem examinations and the methods of preserving and examining diseased tissues. By Francis Delafield, M. D., etc., and T. M. Prudden, M. D., etc., 1885. Cloth, 8vo., pp. 575. Wm. Wood & Co., New York, 1885.

This is the second edition of Dr. Delafield's work, but the scope of it has been so much extended that it may be considered as a new production. In its present form it contains minute instruction in the methods of making post-mortem examinations, of preserving diseased tissues, of preparing them for examination, and of cultivating and examining bacteria; also a description of the pathology of the processes of inflammation and degeneration of structure, the histology of the various forms of tumors, and of the lesions of the different parts of the body, of general diseases, of violent deaths, and finally of the appearances in cases of poisoning.

We need scarcely say that these topics are treated with great thoroughness, and the facts set forth in excellent language. The wide experience of the authors makes itself manifest on every page. The statements made are the result of personal observation, and are set forth with that clearness which direct study alone can give. The illustrations are numerous, and all of them are original, and drawn from actual specimens.

**Our Bodies: Or How We Live. An Elementary** Text-book of Physiology and Hygiene. By Albert F. Blaisdell, M. D. Pp. 285. Price sixty cents. Lee & Shepard, Boston.

The author of this school text-book describes with brevity and clearness the anatomy, physiology, and hygiene of the human frame; touches on dietetics and exercise; gives instructions for the care of the sick; teaches various practical experiments of a simple character, and adds references to a number of authorities for the benefit of those who might feel a desire to study the subject more at length. It is one of the best school treatises on this branch which has come to our notice.

**Annual Report of the Supervising Surgeon-General** of the Marine Hospital Service of the United States for 1884. Pp. 308. Washington, D. C.

The medical reader will find a great deal of instruction in this volume. It is by no means confined to the dry statistics of the service. Nearly a third of the pages are taken up with the descriptions of selected cases from the hospital practice of the surgeons of the corps, generally related with much minuteness and care. There are also special detailed reports on the yellow fever and a selection of reports from the United States Consuls on the cholera epidemics of last year, which it is quite possible may be appropriate reading for the coming summer. Other timely questions, as that of quarantine, the importation of rags, the hygiene of the merchant marine, the care of seamen on shore, and the like, are also discussed in an instructive manner.

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### MAN AS A COOKING ANIMAL.

When Dr. T. Lauder Brunton says anything, he generally says something good. In the course of his lectures on "Disorders of Digestion," published in the English journals, he very truly says that "man has been defined as a cooking animal," and holds that while some of the lowest races are unacquainted with methods of cooking, yet on the whole the definition is true, for one of the most marked distinctions between man and the lower animals is that while the former cooks his food, the latter eat theirs raw.

That man is wise to be a "cooking animal," no one who hesitates to reflect will deny. That well-cooked food is much more easily digested than that which is indifferently prepared is a truism, though admitting of a relative definition and application. Of course, the laboring man can digest the coarsest kind of food, and derive from it nourishment for his muscles, that enable him to do physical work that, being directed by others and requiring on his part simply muscular effort, must be placed on a plane but little above the labor that is performed by the lower animals, who belong to the *non-cooking* class.

But let the man who combines mental and physical labor—he who constitutes the highest type of manhood—endeavor to nourish his muscles and his brain on similar food similarly prepared to that of the day-laborer, and we warrant you that in a very short time his digestion will suffer, and the results of his labors will be of an inferior nature.

We do not mean that he who wishes to work well should live upon the richest and most highly seasoned food, that he should be an epicure, as the word is commonly understood; though it seems to have been an epicurean dinner given by one of the City Companies of London that caused Dr. Brunton's enthusiasm on the subject of good cooking.

It may be that an English epicurean dinner is a much simpler and more substantial and less injurious affair than those to which we are accustomed in this country; if so, then we have no fault to find with it.

However, the fact remains, that good cooking is one of the most important and at the same time one of the most neglected aids to good digestion among the people of our country.

That what might be called "fancy" cooking is appreciated by many, is evidenced by the exorbitant wages commanded by the cooks of our best restaurants, hotels, and clubs, and the avidity with which all who are able, avail themselves of the products of these autocrats of the kitchen; but that *good* plain cooking is comparatively rare among the mass of our housekeeping population is an undoubted truism. We all know that pleasant impressions made upon our senses is the great secret of healthy life, the great lever that causes harmonious performance of all our vital functions; do we know not also that the impression of a well cooked dinner is a most potent aid to digestion, and do we stop to realize how grievously this aid to health is neglected.

Commenting on the advantages of a variety of articles of food, Dr. Brunton says:

"The common order of courses in a plain dinner is soup, fish, joint, pudding, bread and cheese, and dessert. The reason why soup comes first, has been admirably shown by Schiff in his experiments on digestion. This physiologist found that the stomach of an animal which some time before had digested a full meal, had very little power to digest albumen introduced directly into it; and a similar fact was ascertained in regard to an extract made from the stomach itself, this extract hardly acting on albumen at all. The stomach seemed to be exhausted by the effort of digesting a full meal several hours before, and to be incapable of producing pepsine. But if certain substances were introduced first into the stomach, the power to digest albumen was enormously increased. To these substances Schiff gave the name of 'peptogens,' and the most powerful of them he found to be dextrin, and soup made from meat.

"If the human stomach resembles the stomachs of animals in this point as it does in others, then we may say that usually the power of the stomach to digest such substances as hard-boiled eggs or boiled meat, when these are taken alone, will be very slight. But if the meal be begun with a plate of soup and a piece of bread, the bread partly converted into dextrin in the mouth, and the extractive matters of meat contained in the soup, on reaching the stomach, will be absorbed, and will supply to the gastric follicles the power to secrete an abundance of pepsine. In this country, where our butcher's meat is tender and juicy, we not unfrequently find that people in the middle of the day will take a beef-steak or a mutton-chop without soup. In this case, the savory soluble substances are quickly extracted from the meat in the stomach itself, and, being absorbed, supply the necessary secreting power to the gastric glands. But in other countries, where the animals slaughtered for food are often old and tough oxen, which have been employed for years in agricultural service, the meat, being less savory and juicy, will not yield peptogenic matters so readily to the stomach. Consequently, the Frenchman generally boils his butcher's meat thoroughly, and adds pieces of bread to the soup with which he begins his meal, so that the stomach can absorb sufficient peptogenic substance before the hard and tasteless boiled beef is swallowed.

Next to the soup, as I have said, usually comes fish, which is digested more easily than butcher-meat. I have already mentioned, more than once, that the rapidity with which anything dissolves depends very much on the fineness with which it is divided. Now, this is quite true of the different kinds of meat. Beef is acknowledged to be less digestible than mutton, and mutton less digestible than fish. The breast of a chicken is also reckoned very digestible. If we compare these different kinds of flesh, we will find that in beef the fibres are longer and harder than those of mutton, and those of mutton longer and harder than those of the breast of a fowl. The muscle-fibres in fish are arranged in flaky masses, and are not only very short, but are very readily separated from one another. We see, then, that the different digestibility of these different kinds of meat corresponds exactly with the readiness with which the muscle-fibres can be broken up mechanically. That it is the physical conformation of the muscle-fibres, rather than anything peculiar to the animal from which they are derived, is shown, I think, by the fact that, although the breast of fowls is universally acknowledged to be readily digestible, the legs, in which the muscular fibres are long and hard, are by no means specially adapted for weak digestions. With the meat, come vegetables, which are not only useful as supplying inorganic salts, but probably play a considerable part in aiding the recomposition of peptones into albuminous material of the tissues, after their absorption.

After the meal come the bread, cheese, and dessert. The bread will, no doubt, supply additional dextrin, and the cheese additional albuminoids; but, if we direct our attention only to the stomach, and to the chemical changes which are going on in it, it is not quite easy to see why bread, cheese, and dessert should be taken at the end of dinner. If we turn our attention, however, to the circulation and the nervous system, and remember the effect which I have already mentioned as produced upon them by the mastication and deglutition of savory food, we can at once see a good reason for the common manner of terminating a dinner. In order to supply abundant gastric juice for the digestion of the food introduced into it, the stomach requires an abundant supply of blood, and the nervous system must be kept active in order to respond to the calls made upon it. The savory cheese, swallowed in small morsels, and the sweet fruits, which strongly stimulate the nerves of taste, or nuts, which require considerable mastication, cause an abundant flow of blood to the nerve-centres; while the frequent movements of swallowing stimulate the heart, and increase the rapidity of the general circulation."

### ABOUT GRAY HAIR.

The heroine of a popular play is made to exclaim that she never considers a man old until he is fat and bald.

She was quite right in omitting gray hair as a sign of age. Though it is generally esteemed so, there are too many exceptions on both sides to allow it as an infallible sign.

Many persons begin to show gray hairs while they are yet in their twenties, aad some while in their teens. This does not by any means argue a premature decay of the constitution. It is a purely local phenomenon, and may co-exist with unusual bodily vigor. The celebrated author and traveler George Borrow turned quite gray before he was thirty, but was an extraordinary swimmer and athlete at sixty-five.

Many feeble persons, and others who have suffered extremely both mentally and physically do not blanch a hair until past middle life; while others, without assignable cause, lose their capillary coloring matter rapidly when about forty years of age.

Race has a marked influence. The traveler, Dr. Orbigny, says that in the many years he spent in South America he never saw a bald Indian, and scarcely ever a gray-haired one. The negroes turn more slowly than the whites. Yet we know a negress of pure blood, about thirty-five years old, who is quite gray.

In this country, sex appears to make little difference. Men and women grow gray about the same period of life.

In men the hair and beard rarely change equally. The one is usually darker than the other for several years; but there seems no general rule as to which whitens first.

The spot where grayness begins differs with the individual. The philosopher, Schopenhauer, began to turn gray on the temples, and complacently framed a theory that this is an indication of vigorous mental activity.

The correlation of gray hair, as well as its causes, deserve more attentive study than they have received. Such a change is undoubtedly indicative of some deep-seated physiological process, but what this is we can only ascertain by a much wider series of observations than have yet been submitted to scientific analysis.

## NOTES AND COMMENTS.

**The Relations Between the Teeth and the Womb.**

Dr. S. W. Caldwell, of Trenton, Tenn., publishes the following peculiar case in the *Mississippi Valley Medical Munthly*, January 10, 1885:

Recently, while spending the night in the sick-room, I had as company a married daughter of my patient, an intelligent lady, aged about thirty-two years, who related the following—to me—most singular phenomena. Said she: "I am the mother of five living children, one dead. My terms of gestation are unmarked by anything unusual. My labors last about eight hours on an average. My last came as usual with me—pain beginning in the back, passing down to the lower part of my bowels. When I had been in labor about an hour, the pain suddenly ceased in my back and womb, but set up in a tooth that had been aching several times during the past nine months. The pain was paroxysmal, coming and

going just as it did in the womb. The pain was in my tooth when my physician came, and he wanted to pull it, but it being one of but few remaining molars, I said to him that the cavity in it was small, and that I wanted to have it filled—couldn't he put something in it and stop the aching? He put cotton saturated with chloroform in the cavity. The pain left the tooth to appear in the back and womb; but the effect soon passed off; the pain in a few minutes returned to the tooth, to be again and again relieved by the chloroform; the doctor said no progress was being made in the labor, and that in his opinion none would be till that tooth was removed."

"Did he say he had ever seen or heard of such a case before?"

"No, sir. Twelve hours had now passed; my former labors had none gone over eight—generally six hours terminated them. I had become, I thought, exhausted, and asked the doctor to pull my tooth, which he did, and my baby was born in an hour."

The attending physician in the above case, and with whom I was personally well acquainted, died not long after, so that I cannot have his history of it. My knowledge of the lady, though, justifies me in giving full credence to her statement.

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**Tabes and Progressive Muscular Atrophy.**

But few cases have thus far been reported, where locomotor ataxia was associated with progressive muscular atrophy. Eulenburg describes a case of this kind in the *Deutsche Med. Zeit.*, Dec. 22, 1885. In his case also the sclerosis of the posterior columns preceded the outbreak of the atrophy. After the patient had suffered for ten years from most symptoms of tabes as, sensation of a constricting band around the lower part of the chest, lancinating pains, gradually increasing uncertainty in walking and standing, severe gastralgic attacks recurring every 2–4 weeks with persevering vomiting and a peculiar left-sided headache, disturbances of the bladder, myosis and immobility of the pupils, and about six months ago the phenomena of progressive muscular atrophy made their appearance. First some muscles of the thumb of the right side, and then those of the left were attacked, afterwards the other muscles of the thumbs, and then those of the small fingers, the interossei and the extensors of the hands. Thus far the atrophy is limited to the muscles of the forearm; the muscles of the back evince but a peculiar weakness, and the atrophic arm-muscles show a decided diminution of electro-muscular contractility, some of them not at all responding to the faradic current, while the galvanic irritability is either diminished, increased or otherwise affected with the general formula of ACC>KCC (anode, closure, contraction stronger than anode CC, the opposite of the normal reaction).

From the post-mortem examinations of other cases, it is to be presumed that we have in these rare cases a complication of the posterior sclerosis with the characteristic lesions of neurotic progressive muscular atrophy, *i. e.*,, with degeneration and atrophy of the large (motoric) ganglion cells of the anterior cornua, especially of the cervical spine. Charcot is of the opinion that the disease spreads to the anterior cornua by means of the inner fibres of the root-fibre-path as first indicated by Köllicker, for these fibres pass directly to the exterior group of cells. Eulenburg, however, believes that in some cases this connection cannot be proven, when the complication must be considered an accidental complication, probably originated by the same poison that gives rise so frequently, if not always, to locomotor ataxia of syphilis.

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**Diagnostic Errors and Practical Hints.**

The following little article which Dr. A. B. Tadlock publishes in the *Nashville Journal of Medicine and Surgery* for February, 1885, is well worthy of note. He says:

"Other things being equal, we should say that a correct diagnostic rule would always lead to correct diagnostic conclusions; but the crucial tests of experience, even in this day of scientific perfection and wisdom, will occasionally teach us that *rules*, like facts and theories, may be incorrect, though recognized, practiced and taught for ages. In an interesting article by J. W. Long, M. D., he speaks of an arm presentation in a protracted case of labor in which he was consulting physician, as follows: 'Upon making a digital examination I found the little fellow's protruding hand fit my left hand, exactly as though we were shaking hands—thumb to thumb, and palm to palm.' Remembering the rule laid down in the books, the writer adds: 'The diagnosis flashed across my mind in an instant—the child was lying across the pelvis, its head to the right, its back to the front.' (Page 551, Dec. No.) Not many years ago a similar case, under very similar circumstances, occurred in my practice, and while 'the indications were plain enough,' as he says, still the mode of turning according to the rule was not as satisfactory, for the reason that the head was directly in the opposite flank from that

in which the 'shaking hands rule' required it to be. The child's hand was turned and lay behind its back. So the exception to the accepted *rule* was verified. This can be easily demonstrated by any one shaking hands with some person whose back is turned towards him.

"On page 537 (same No.) we find the history of an interesting exploit after a misplaced hairpin. In my first years of practice I found the same sort of a pin in a like predicament, and equally unsatisfactory to its locator, and puzzling to the prospective dislocator. Removal was effected, however, by passing a perforated gum catheter over one end of the pin when exposed, and then by pushing the catheter it was forced around the bend of the pin and back over the opposite end, and thus entirely encased, extraction was accomplished easily by the removal of the catheter."

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**Rectal Alimentation.**

This subject is so interesting and important that we cheerfully reproduce the following case which Dr. Taylor reports in the *Cincinnati Lancet and Clinic*, February 7, 1885:

A married woman, twenty-five years of age, had had purpura hemorrhagica; she recovered from this sufficiently to take a trip, and seemed to be well when she came home. Suddenly, she was affected with a most excessive uterine hemorrhage, which came on at the time of her normal menstruation. The speaker was summoned and found the woman very pale and much prostrated, with great coldness of the surface and of the extremities particularly; a pulse of 140, weak and thready; and vomiting of the most aggravated character. The vomiting was constant, and everything swallowed was instantly rejected by the stomach. Three teaspoonfuls of ice-water were vomited as soon as taken. No nourishment whatever could be given to the patient in the ordinary way. The speaker, therefore, ordered an injection every three hours of four ounces of milk with ten drops of denarcotized opium; this was continued for ten days, and nothing else given, though attempts were several times made to administer nourishment by the mouth, but this was invariably followed by severe vomiting. However, the serious symptoms gradually disappeared; it finally became possible to give the patient food and medicine by the mouth; she became stronger, and had a better color. During the whole time the woman was very thirsty, and would beg for water, but this was instantly rejected.

The bowels moved once in a couple of days, the passages being soft; the urine was very little in amount. There was no hysterical element in the case, though the woman was nervous.

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**Should a Person Affected with Psoriasis Marry?**

This interesting question was brought before the New York Dermatological Society (Dec. 23, 1884,) by Dr. Piffard, who said that he had a patient suffering from a moderate psoriasis, who asked him his opinion as to the propriety of marrying. Dr. Piffard said that he would like to have an expression of opinion from the members of the Society, on the subject.

Dr. Taylor said that he had seen many cases in which psoriatic patients had perfectly healthy children. In giving an opinion, he would be influenced by the length of time the eruption had existed, as well as its activity. If the question were propounded to him, he would say that if the patient suffered continuously from the disease, or if the attacks were severe, he would advise the patient not to get married; but if the attacks were ephemeral, he did not see any objection to marriage. In his mind there was no question as to the heredity of psoriasis, but it was generally in inveterate cases of long standing.

Dr. Sherwell could see no reason why a patient thus affected should not get married. He looked upon psoriatic patients as among the strongest persons. He had seen only one unhealthy patient, among several hundred, and he had fibroid phthisis. In fact, he believed that the occurrence of psoriasis was an indication of health.

Dr. Robinson would certainly advise psoriatic patients not to get married, unless there was some other good reason aside from the question of health. He said that psoriatic persons were often unhealthy, and cited a case of a patient with psoriasis in whose immediate family two persons died of phthisis and another had scrofuloderma.

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**The Effect of the Ingestion of Large Quantities of Grape Sugar on the Urine of Children.**

Concerning this interesting physiological question, Dr. John M. Keating tells us in *The Therapeutic Gazette* (January 15, 1884,) that his attention has so frequently been called to the fact that sugar, to a greater or less amount, is found at times in the urine of persons who are supposed to be in excellent health, and the question has so often arisen whether or not diet has anything to do with this, that he determined to satisfy himself by a series of investigations as to the correct interpretation of this condition. He has had under observation at various times numbers of

infants whose diet was composed of milk and *Mellin's food*. Some of them took as much as an ounce and a half to two ounces of Mellin's food during the twenty-four hours. This consists, as is well known, of malted grain, a large part of the starch of which has been transformed into grape sugar. He has failed to detect a single trace of sugar in the urine of any case of this kind examined so far; and as all these children are in excellent health, he is led to conclude that the appearance of sugar in the urine of adults, whether it is or is not traceable to the diet of the individual, is an evidence of, at least, functional derangement which demands careful investigation. From these experiments he believes that if we can draw an analogy between a healthy infant and an adult—and he sees no reason why we should not—a sugar diet, unless in very great excess, in a healthy individual ought not to produce saccharine urine; if such is found, disorder or disease is probable.

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**Lepra and Tubercle-Bacilli.**

One author after another is added to the list of those who are convinced that the tubercle-bacilli really are the pathogenic cause of tuberculosis. But the latest investigations have demonstrated the great difficulty which the observer has to overcome in the recognition of these bacteria. The lepra-bacilli are so very similar, not only in their appearance and in their reaction to coloring matter, but also in their behavior under pure-culture, that in cases of doubt the diagnosis becomes exceedingly hazardous.

We have to be grateful to Dr. V. Guttmann, who at the last meeting of the Berlin Medical Society communicated a method by which the distinction of the two species of schizomycetes becomes a much easier one. Guttmann says that they may be recognized without difficulty in dry preparations on the slide, but not by their appearance, but by their position. The tubercle-bacilli of the sputum are never seen in cells, but always perfectly free, and the same holds good of the tubercle bacilli from caverns, as they anyhow contain but the detritus of cells. But the dry preparations on the slide, of lepra-bacilli, though partly also free, are met with in immense numbers, mainly in cells, which on the slightest pressure may be easily discerned in the lepra-fluid.

With the usual method of coloring by anilin tints (red and blue), the lepra-bacteria are at once recognized, for they appear as red rods in blue cells, and the latter are so numerous as they never show themselves in case of tubercle-bacilli.

**Sleeplessness.**

A foreign exchange very truly says that sleeplessness is really wakefulness, and that before we resort to stupefying drugs to remedy this condition, we should inquire into the cause and remove it if possible. The cases of Napoleon and other busy men, who develop the power of self-induced sleep to such an extent as to be able to rest whenever and wherever they please, for longer or shorter intervals, as the conditions admitted, are quoted. We know that excessive mental work, worry, the abuse of alcoholic beverages or anything that will tend to keep too much blood in the brain, will ultimately produce a chronic engorgement of that organ that will render physiological sleep almost an impossibility. We have known insomnia, due to excessive alcoholic indulgence, to be very effectually relieved (and permanently so) by the application of dry cups to the nape of the neck. To discover the cause, will, of course, in many cases, take time, and involve a scientific testing of the relative excitabilities of the sense-organs, central or radial and peripheral. The discovery of the cause, however, affords ample recompense for the trouble of searching for it. With the sphygmograph and a few test appliances, such as Galton's whistle, an optometer, and other instruments, the recognition of the form and cause of sleeplessness can be made in a brief space, and then, and then *only* we protest, it can be scientifically—i. e., physiologically—treated.

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**Rheumatic Glossitis.**

From a foreign exchange we learn that an alleged case of rheumatic glossitis is recorded by Dr. Carvallo in *La Cronica Médica*. The patient was a man aged forty, who one day found that his tongue began to enlarge and that articulation was difficult. The swelling increased so much that the tongue was no longer confined in the limits of the mouth. There was much difficulty in breathing; the lips were blue; the pulse was small; salivation was incessant; deglutition was painful; speech was impossible, and at times attacks of suffocation threatened dissolution. Leeches were applied to the angles of the lower jaw. Dr. Carvallo remembered to have read in M. Jaccoud's "Traité de Pathologie Interne," that Lawrence had written of the occurrence of glossitis as a consequence of rheumatism. The patient admitted that he had had rheumatism, and that he even then had rheumatic pains about the shoulders. An infusion of jaborandi was prescribed, and afterwards a draught containing sali-

cylate of soda. The next day the tongue had diminished greatly in size, and had returned to the buccal cavity. The suggestion that such cases of swelling of the tongue may depend on a rheumatic agency is perhaps valuable; the proof that the case mentioned was of rheumatic nature cannot be said to have been given.

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**Infants' Food.**

This much-discussed question has been again discussed before the Obstetrical Society of Cincinnati (*Obstetric Gazette*, January, 1885), by Dr. J. L. Cleveland, who, in concluding his paper, remarked that while the members of the society might differ in the minutiæ of infant diet, in the main they were all agreed. The mother's milk contains all the ingredients necessary to the maintenance of the child, and so does the cow's milk.

There is too much caseine in the latter, which when coagulated forms a hard, indigestible mass. This may in a great measure be avoided by adding water, oatmeal, barley, etc.

One great difficulty in the management of the diet of infants is the lack of judgment on the part of the nurse. Every time the child cries it is supposed to want food, when often it cries because it has had too much food.

We can not be very positive in our recommendations of artificial food. What may answer well with one child may be found to totally disagree with another. He thought it very important to impress on the mind of the nurse the necessity of offering the child water at certain intervals. It helped to prevent the formation of hard masses of caseine, and the digestive juices acted better in its presence, when given in moderate quantities.

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**Cocaine in the Removal of Foreign Bodies from the Eye.**

Still more about cocaine. In the *London Med. Times*, January 31, 1885, Dr. A. MacGreggor reports the following case:

A farm servant, while engaged working at a threshing machine, was struck on the right eye by part of a husk of corn with such force that it was firmly embedded in the substance of the cornea. He consulted me two months afterwards, and at that time, near the inner edge of the cornea, there was a large ulcer, the floor of which was covered with greyish lymph, but he could see no foreign body. The man, however, said he was certain the offending particle was still there. He applied a 10 per cent. solution of hydrochlorate of cocaine; in ten minutes the cornea was insensitive; he gently scraped the lymph away, and, much to the delight of the patient, removed a thin piece of husk more than an eighth of an inch long and a sixteenth broad.

Considering the length of time the foreign body was allowed to remain in the cornea, the signs of irritation were wonderfully slight, due, no doubt, to the atropine ordered by the gentleman who saw the patient soon after he received the injury.

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**Rheumatic Pains.**

Constantin Paul recommends in the *Union Méd.* in cases of rheumatic pains as in lumbago, torticollis, pleurodynia, intercostal neuralgia, sciatica, etc., the covering of the painful parts with a compress saturated with oil of turpentine, but considers it important to place some impermeable substance, as gum cloth, oil silk or wax paper, over the compress, for in cases where such a protective had been omitted, the effect was not so favorable. It is probable that there is some virtue in these remedies, for crude kerosene oil, so nearly related to turpentine, has frequently been employed in this country for the same purpose, and not seldom stopped the pain. If no impermeable substance be laid over the compress, the rapid evaporation of the turpentine probably diminishes the effect of the drug, which can act only as a counter-irritant, and its irritating action must, therefore, be the greater, the more concentrated the remedy.

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**Extirpation of the Kidney.**

At the December meeting of the Paris Academy of Medicine, Dr. Le Dentu presented a patient in whom he had extirpated three years ago the left kidney to remove a urinary fistula which, after an operation for a hydronephrosis, had remained unclosed in the iliac fossa. After the extirpation of the organ, the abnormal flow of urine at once ceased, but another fistula remained, which discharged pus. To establish its cure, Le Dentu left a drainage tube in the channel. When the discharge of pus had dwindled to a minimum, the tube was removed, and two days later the fistula closed.

The patient passes since the operation about three pints and two ounces of urine daily, and the urine itself is normal and free from morbid contents. It is not possible to demonstrate either by palpation or in any other way an enlargement of the remaining kidney.

The action of the heart is normal, and evinces not the least disturbance.

# NEWS AND MISCELLANY.

## Notes on Medico-Legal Cases.

BY HENRY A. RILEY, ESQ., NEW YORK.

In a Wisconsin court there was recently an interesting discussion in reference to the right of an insane criminal to a regular trial of the issue by a jury at the same time that the criminal charge was tried, and it was held that there was no such right. The person was under indictment and about to be tried when the district attorney informed the court that there was a probability that that the accused was insane and unable to care for herself, and the court thereupon ordered an investigation. A jury was impanneled to try the special issue, and having found the accused insane, the trial was indefinitely postponed, and the criminal committed to an insane asylum, there to be kept until a recovery would permit of the trial. An appeal was taken from this order, and the higher court, after a careful examination of the statute, declared that it was legal.

An interesting statement is given of the common law bearing on the subject, and it was stated that if a criminal became insane after the crime was committed and before he was arraigned, he was committed to prison until the disability was removed. The same course was taken if he became insane after the plea of not guilty was put in, and before the trial. If there was any doubt as to the insanity, the question was usually tried in a summary way by a jury.

In such cases it was, however, in the discretion of the court whether to try the preliminary question of insanity by a jury, or adopt some other mode. In one case the Attorney-General prayed an inquest, which was immediately granted, and the investigation was proceeding in a summary way, when Lord Denham, C. J., stopped the prosecution from calling any further witnesses, and virtually charged the jury to return a verdict of insanity, which they did. The prisoner was thereupon ordered into custody until the further direction of the Queen was made known. The court was authorized to make inquisition of the insanity of the prisoner by a jury or otherwise, as it deemed most proper. The inquisition was only preliminary to the trial of the offence, and had no bearing on the guilt or innocence of the prisoner. It was entirely collateral to the main trial, which was indefinitely postponed until the prisoner's sanity and capacity to act for herself on such a trial should be restored. The statute certainly did not give a jury trial as a matter of right upon such collateral issue. Undoubtedly it may, in a proper case, make such inquisition by a medical commission or otherwise, at its discretion.

In the time of Sir Matthew Hale it was said there were "two sorts of trials of idiocy, madness, or lunacy; the first, in order to the commitment or custody of the person and his estate, which belongs to the king, either to his own use and benefit, as in case of idiocy, or to the use of the party in the case of accidental madness or lunacy; and in order hereunto there issues a writ or inquisition to the sheriff or escheator or particular commissioners, both by their own inspection and by inquisition to inquire and return their inquisition into chancery; and thereupon a grant or commitment of the party and his estates ensues; and in case the party or his friends find themselves injured by the finding him a lunatic or idiot, a special writ may issue to bring the party before the chancellor or the king to be inspected." The course outlined in the Wisconsin case is a very common sense one, and has been adopted by a number of the States, and noticeably so by New York, where the abuses of trying the issues of insanity and guilt at the same time were glaringly manifest.

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A curious case on insanity is reported in a Missouri court, where the question arose as to the validity of a tax title to real estate, the owner having allowed it to be sacrificed because of a delusion that Christ had forbidden the payment of tribute, except to the church. In consequence of this idea he refused to pay any taxes, and the land was, after a time, sold. Subsequently a suit was brought to set aside this tax deed; and as it appeared that the insane person had not been represented on the trial by a guardian, and the purchaser was aware of the insanity, the relief asked for was granted.

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The Dairy Commissioner of New York has just made his annual report to the Legislature in regard to the working of the law passed at the last session absolutely prohibiting the manufacture and sale of oleomargarine. He states that probably 80 per cent. of the traffic has been broken up by his efforts, and that sixty arrests have been made. Of this number, eleven have been convicted and forty are still under indictment. A test case has been made as to the constitutionality of the law, and is now pending. It is curious to notice that the opinion given by William M. Evarts that the law was unconstitutional was used as an argument by those opposed to his election as United States Senator from New York. The Legislature did not, however, pay much attention to the objection.

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The powers of Health Boards are indirectly concerned in a suit just brought by a firm of cream-of-tartar mannfacturers at Edgewater, Staten Island, although the main point is that the Health Board of the town was illegally created, and had no real power at all.

The manufactory was thought to be a nuisance, so that the townspeople were greatly exercised over it, and as a result, a Health Board was at once appointed, and took active measures to suppress it. There were numerous threats to burn down the establishment, and so serious did the situation become that the proprietors became frightened, and closed up the works voluntarily. Having lost a good deal of money by this course, and believing that the Health Board was illegally appointed, the firm has brought suit against the town and its improvised Board, claiming $104,000 damages. The trial has not come off yet, but promises to be interesting.

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A case was tried not long since in the United States Court at New York, to see if a person could

be held liable for taking his children, who were sick with the whooping-cough, to a boarding house, where there were a large number of people. The result was that the children of the landlady became sick, and the boarders in order to avoid the contagion left in a number of instances. The court held that a person had no right to spread the disease by taking his family about from place to place, and if he did so he was liable in damages. It was stated that taking infected animals from one place to another was negligence, entitling a person to sue for damages, and that there was even greater reason for holding the offender liable in the case of human beings. A motion for a new trial was therefore denied.

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**Sanitary Influence of Forest Growth and Public Squares.**

Dr. J. M. Anders, of this city, read a paper on "Sanitary Influence of Forest Growth and Public Squares," before the Philadelphia Social Science Association, at the Hall of Mercantile Library, January 29, 1885. He began by stating that the remonstrances of the public press, as well as of scientific writers, against the wanton devastation of our primitive forests were not needless, and he cited the experiences of many European and Oriental countries in proof. Wherever, in past time, the forests have been cleared away by a people, the effect has been the drying-up of the smaller streams, followed by infertility of the soil, insalubrity of climate and frequently utter desolation. Forests have a mechanical influence. Clumps and belts of trees act as efficient interceptors of wind-currents, and modify extremes of temperature. They also afford efficient protection from malarial diseases. Forests are great natural dispensers of moisture, and exert considerable influence upon the hydrometeorology of the region in which any fair proportion of woodland exists. Forests produce ozone, and it cannot be questioned but that ozone is the chief natural purifying agent of the atmosphere from all organic matter. The influence of forests upon the soil and running streams cannot be over-estimated.

From these various influences of forest growth, continued Dr. Anders, it is quite clear that they exert a potent effect upon the salubrity and healthfulness of a locality. The proper ratio of woodland for ordinary hygienic purposes is not less than twenty-five per cent. Forests are capable of rendering valuable and energetic service in connection with health stations. Thus at a resort of medium altitude not more than fifty per cent. of forest area would produce an effect suited to cases of consumption requiring a comparatively dry climate. Again, in those predisposed by inheritance to consumption, a residence in an atmosphere such as that described would prove a most powerful prophylactic measure. In all the various conditions of consumption in whose treatment the element of dryness is indicated, the air of the pine grove offers advantages superior to those of forests composed of different species, for the reason that pine trees exhale less moisture, while they possess all the other advantages mentioned, such as the generation of ozone, protection from malaria, and objectionable wind currents.

The lecturer then passed to a consideration of the public squares, which, he said, might be looked upon as forests of reduced size, and nowhere could trees and ornamental shrubbery prove their virtues to greater advantage to public health than by improving the conditions of a vitiated city atmosphere. The same ratio of woodland for sanitary purposes (twenty-five per cent.) should be assigned for retreats of this kind, but as this would be impossible in those portions of older cities already densely built up, a near approach to the proper standard might be attained by the more general planting of trees on either side of our thoroughfares. This latter suggestion, if carried out, would have the effect of improving the air of the streets, which is really the air we breathe, and thus by means of free ventilation, a purer and wholesomer atmosphere could be admitted into our dwellings. Again, public squares form a convenient substitute for a more complete change of air in the cases of that large class of little patients suffering from infantile diseases of summer. There is no fact better established than that the usual summer ailments of infants can be most successfully treated by a change of air.

In conclusion, Dr. Anders said that there was no more important subject inviting the attention of municipal law-makers than that of open squares and their keeping up under proper regulations. He thought it no exaggeration to say that any improvements they might make in this regard would be rewarded by a realizing sense of having done the greatest good to the greatest number.

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**Good Advice to Physicians.**

The following wise counsel we note from the *Maryland Med. Jour.*, January 17, 1885:

At this season of the year the practitioner of medicine is usually interested in gathering in the results of his past year's labor. It is eminently a time when his thoughts turn from the pursuit of scientific speculations to the every-day affairs of life, which must press with more or less weight upon all who struggle for the necessities of life. Whatever motives may actuate a few scientific devotees, the fact remains that the vast majority of medical men are working and toiling for bread and meat for themselves and for their families. The doctor has necessities, just as other people, and he generally works harder than the majority of people to meet these necessities. He has obligations to meet just as other people, and, as a rule, must depend upon his medical work to meet them. If, in addition to his scientific attainments, he possesses a fair allowance of business thrift and enterprise, his obligations are generally met, and the hand of penury presses lightly upon him. Unfortunately, however, a large number of medical practitioners are deficient in those qualities which go so far to make their toils light and their obligations easy. Many physicians are careless in money matters. They are poor collectors, and from this fact are often indifferent creditors. They are frequently too easy in demanding what is due them, and correspondingly careless in meeting their own obligations. In this way they lose a large share of their hard-earned services, and become, in consequence, involved in their responsibilities to

others. We have known a physician to mortgage his inheritance, to borrow money from banks and money-lenders, to meet pressing family expenses, rather than enforce collections from patients amply able to discharge their obligations to him. It is easy enough to see the result of such a method as this. A look into the homes and surroundings of the widows and orphans of many deceased medical men is a sufficient commentary upon this system of medical practice. The statement is often made that the profession is overcrowded, and is in great danger of impoverishment from this circumstance. We believe that the true danger is from another direction. It comes rather from the use of faulty methods of conducting practice, from neglect and carelessness in collecting bills for services rendered, from undercutting and underbidding for patronage. The effect of a system of lowering fees, and of careless collections, will affect an entire medical community. One physician can disorganize a whole section of a city, town, or country in which he may happen to reside, by adopting methods after this manner. Because a physician is engaged in a peculiar character of public service, is in itself no reason why his business methods should vary widely from those adopted by others who work for the public good. We certainly would not undertake to encourage a purely monetary view of medical work. The physician who sees only in his work a result in dollars and cents, has not the highest conception of his art.

But the physician should not confound his dual relations to the public. He should not be carried away by a false sentiment on the one hand, or a purely mercenary spirit on the other. There is just blending of the two, and he should aim to conduct his medical work on a basis that will insure respect, authority, and a just compensation for his services as a public servant.

To insure this respect as a doctor (teacher) it is just as necessary that he should be a man of integrity, of scrupulous honesty, and of correct business dealings as that he should possess medical attainments. The public does not always form its estimate of a physician by his skill or knowledge. Indeed, his moral and personal qualities may far over-balance his astuteness and learning. The man who seeks public patronage upon his scientific attainments and nothing else, is far less likely to succeed in securing it than the man who relies upon his moral and personal qualities with only a modicum of medical ability. In other words, the practitioner of medicine must be possessed of not only skill and learning, but of high moral, social, and personal qualities as well, if he would attain the highest position of respect and influence in any community.

Turning, now, to the purport of our remarks, the season of the year suggests a collection and settlement of accounts; it calls for a few weeks to be given up to business considerations. Let every physician make off his accounts, enforce their collection, and then discharge his business obligations. The surplus should find its way into safe and judicious investments. The inquiry may suggest itself, why venture such advice? We answer, we believe it is needed. Our work as journalists brings us into relations with many physicians. We know how careless and reckless many of them are in money matters. We know that many of them fail to collect what is due them, and many more fail to pay what they owe others. We do not attribute such failures to dishonest principles. On the contrary, we believe that many of these very men would give away their last cent if asked for it. They are generous, but not just. Their faults are the outgrowth of a recklessness and carelessness in matters of business, which, if applied to their habits as practitioners of medicine, would make them dangerous citizens to any community. Therefore, we say to those who are careless, collect what is due you, square up accounts, and lay aside a surplus for future use.

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**Official List of Changes of Stations and Duties of Medical Officers of the United States Marine Hospital Service, for the week ended February 14, 1885.**

Guiteras, John, passed assistant surgeon. When relieved at Key West, Fla., to proceed to Charleston, S. C., and assume charge Feb. 11, 1885.

Kalloch, P. C., assistant surgeon. To report to passed assistant surgeon Peckham, at Wilmington, N. C., for examination for promotion, Feb. 10, 1885.

Glennan, A. H., assistant surgeon. Relieved from duty at New Orleans, La., to proceed to Key West, Fla., and assume charge, Feb. 11, 1885.

RESIGNATION.

Heath, W. H., passed assistant surgeon. Resignation accepted by the Secretary of the Treasury, as tendered, Feb. 14, 1885.

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**Items.**

—To keep the bowels open in dyspepsia Prof. DaCosta says the best thing is aloin gr. $\frac{1}{10}$—$\frac{1}{5}$ twice a day.

—Sir William Jenner, of London, commenced life as an apothecary in a small back street, and for a long time the battle of life fell severely on him.

—Prof. Bartholow speaks very favorably of the latest substitute for quinine, to wit: antipyrine; and says "it is a certain and powerful antipyretic."

—Dr. Piffard recommends a solution of the bromide of arsenic, one per cent., for pimples. One or two minims should be given in water before meals.

—In the *New Orleans Med. and Surg. Jour.*, Jan'y, 1885, Dr. J. McF. Gaston, reports a case of perforated fracture of the cranium, followed by epilepsy.

—In the *St. Louis Courier of Medicine* for Jan'y, 1885, Dr. Wm. C. Glasgow reports a case of aneurism of the aorta, communicating with the superior vena cava.

—A radically disposed aspirant for obstetrico-chirurgical fame, was once asked what he would do in a case of post-partum hemorrhage. He promptly replied, "dilate the os and search for bleeding vessels."

—Before a recent meeting of the Clinical Society of Maryland, Dr. C. W. Mitchell exhibited a spleen which weighed only one drachm. He

could give no history of the case; the individual was a large, well-nourished man.

—De Lavra (*El Siglo Medico*) gave extract of gelseminum in a case of refractory sciatica in a woman eight months pregnant. He gave three doses of one grain each. The cure was rapid and permanent.

—The Fellows of the Royal College of Surgeons of Ireland, have voted to concur with the Council of the College in having the charter altered, so as to admit women to all diplomas of the college on terms equal with men.

—The Cleveland, Ohio, Board of Education has issued an English version of the Brussels Manual for teachers, and adopted it for use in the public schools. This manual contains brief instructions as to the first symptoms of transmissible diseases.

—Labbe states that he has had favorable results with salicylate of soda in cases of sciatic and supra-orbital neuralgia, where quinine had failed. L. prescribes ʒij of salycilate of soda in the first two days; ʒj on the third day, before eating, with a little Vichy.

—Dr. F. A. Burrall, of New York, in the *New York Medical Record*, says that salt and water will readily cleanse the cups of the Gaiffé battery after they have been used. He adds, "those who use this convenient faradizer will, I think, appreciate the benefit of this information."

—A proposition was set on foot some time since to hold an International Conference on Sanitation. It is stated that the project, which was mainly initiated by Signor Manzoni, the Italian Minister for Foreign Affairs, will shortly take definite shape at a meeting to be held in Rome.

—In the *Archives of Medicine* for December, 1884, Dr. Henry B. Sands publishes a valuable paper on the rupture of veins, with the report of a case in which the rupture of a deep femoral vein was successfully treated by ligation of the ruptured vessel.

—Mayor O'Brien, of Boston, has appointed Drs. H. I. Bowditch, H. J. Bigelow, Francis Minot, R. M. Hodges, S. A. Green, J. G. Blake, W. L. Richardson, George B. Shattuck, and C. F. Folsom, an advisory committee in regard to the question of a possible epidemic of cholera next summer.

—Something very like heredity in crime was illustrated in a case which came before one of the Glasgow police-courts a few days ago. A boy of twelve years of age was found guilty of stealing a pot of marmalade from a cart in the street, and was sentenced to four years' detention on board a training-ship. In the course of the evidence it came out that at present the boy's mother, grandmother and uncle are in prison, while his father has deserted him.

## OBITUARY NOTICES.

### DR. LOUIS ELSBERG.

The death of Dr. Louis Elsberg, one of the best known laryngologists in this country, occurred February 19, 1885, in New York city. He was born in Iserlohn, Westphalen, forty-eight years ago, and came to America with his parents when only thirteen years old. His family settled in Philadelphia, where he graduated at the Jefferson Medical College in 1857.

Until recently, he was President of the American Laryngological Society. As one of the founders and a professor of the Polyclinic Institute, he accomplished much in elevating the standard of professional skill in the special branch of medical science to which his life was devoted.

Dr. Elsberg was connected with all the more important medical associations of this country, and sustained honorary relations with many similar societies abroad. His writings were extensive and his decisions universally accepted as authoritative. He was the editor of the *Archives of Laryngology*, and a regular contributor to Schmidt's *Jahrbuecher*. As the author of a work on the "Throat and Voice," he attracted much attention. He was a frequent contributor to the MEDICAL AND SURGICAL REPORTER, and at one time took charge of a department in the *Compendium of Medical Science*. His death was attributed to pleuro-pneumonia.

### WILLIAM BRAITHWAITE, M. D.

Mail advices from England announce the death of the well-known English physician and surgeon, William Braithwaite, the founder of *The Retrospect of Medicine*, who died at his home in Leeds on January 31. *The Yorkshire Post* of February 2, contains the following:

He was the oldest medical practitioner in Leeds, and in his large and varied practice he was esteemed on all hands, both on account of his great knowledge and his sympathetic and kindly disposition. Dr. Braithwaite was born in 1807, and was therefore in his seventy-eighth year. His health for some time past has been such as to cause serious apprehension on the part of his family and friends, and his death on Saturday was not altogether unexpected. He was brought up by the Rev. Richard Hale, at Harewood Vicarage, and was apprenticed to the eminent surgeon, Mr. Thomas Teale, and afterward to his equally eminent son, Mr. Thomas Pridgin Teale, so that he pursued his medical curriculum under exceptionally favorable circumstances. He also studied at St. George's Hospital. The deceased gentleman began practice in Leeds on his own account in 1830, and filled the post of honorary surgeon to the Eye and Ear Infirmary, and lectured at the Leeds Medical School on the diseases of women. Though occupied in the management of a large practice, he found time to add materially to the literature of his profession. In 1840 he began a medical work which has since become widely known. Its title is *The Retrospect of Medicine*. It is published half-yearly, and has now reached its ninetieth volume. It is republished in America, where it is widely known and as highly valued as here.

## MARRIAGE.

CONE—DUNNUM.—January 31, 1881, in Brattleboro, by F. E. Tower, Dr. C. B. Cone and Nellie M. Dunnum, both of Springfield, Mass.

## DEATH.

BIRD.—October 15, 1884, of typhoid fever, at his home, The Lindens, South River, Anne Arundel county, Md., William P. Bird, M. D., aged 58 years.